

THE  
BABY

HIS CARE AND  
TRAINING

MARIANNA WHEELER

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THE PROPER WAY TO LIFT THE BABY

# THE BABY

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## HIS CARE AND TRAINING

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By

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ing Schools of the New York Hospital  
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ILLUSTRATED



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## INTRODUCTION

THIS is the age of the child. At no previous time has there been so great and so intelligent an interest in all that pertains to infancy and childhood. It is beginning to be appreciated that knowledge of the proper care does not come by intuition, and that maternal instinct, no matter how strong, is not a safe guide.

There is great need of instruction from those who are not mere theorists, but who have had a large personal experience in grappling with the problems which confront every mother in the nursery. The young and inexperienced mother is suddenly called upon to assume a responsibility which in its gravity is without a parallel in her life, and everything which can make her task easier or her burden lighter is sure to be appreciated. By the time

## INTRODUCTION

of the second or third child, the mother has usually received her preliminary training, and does far better with them than with the first one.

That so many lose their first babies is owing in no small degree to their own mistakes and lack of experience. This is of itself an emphatic expression of a need for better education in all these matters. The mother's province lies not in the use of drugs, but in a knowledge of the conditions of health, and how they may be preserved by intelligent care and judicious feeding. She must be guided by her judgment, not her impulse, and in all her training she should have some well-defined policy, since a medium policy well executed is better than the best of theories not carried out.

No book can take the place of personal experience; but the experience of others may help much with the special phase of the problem which troubles a given mother. The larger part of the minor derangements, the serious ailments, and even the deaths, among infants and young children are the result of ignorance, neglect, or

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bad management. They are due to causes which may be, in a large measure, prevented. In prevention the most important part is that of the mother, and her work is largely in closely watching little things. It is the aim of books like this one to assist in just these matters—an aim which we think has not been missed.

L. EMMETT HOLT, M.D.





# THE BABY

HIS CARE AND TRAINING



## CHAPTER I

### THE BABY

AT the present time, when all branches of educational work are being advanced and improved, one department seems to have been quite forgotten, and this is the education and preparation of the young woman for motherhood. Maternity in these days is often anticipated with dread instead of with the pleasure which should accompany the thought, and this is not surprising when one realizes the ignorance of the average young mother as to the proper means of caring for her baby. The fact that nervous diseases are on the increase is true, and why? The chief cause is that the word *moderation* seems to be growing obsolete. This is especially true as regards the care and training of infants. It is the infant which makes the child, and the child the man. It is very unusual that a child is not

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born healthy. He is born without habits, good or bad—simply sent into this world innocent and helpless, his very life dependent upon others—and it is the parent whose pleasure it should be to guide this little life from its very first dawn to one of contentment, health, and happiness. There is no reason why the young mother with one or several small children should succumb to her cares, become worn out, and deny herself all the pleasures which make life worth living. A mother owes a duty to herself and to her offspring, and this duty is to start from the very beginning with the infant's training. She should of her own knowledge know what is best for the baby. She should be the one who can direct the untutored maid, or, if she has a trained and experienced nurse, be independent even of that valuable person. It is not right that a mother should give her infant over to the care of any nurse, no matter how good she may be, and allow that person to undertake the entire training and guiding of this most important part of life. A right start in life means everything in the development of a healthy, whole-

## THE BABY

some, happy life later. With the baby use *moderation*. Never go to extremes in anything. Begin by being systematic and punctual. Have a time and place for everything, and see that these rules are adhered to. The chief things to be considered as absolutely essential to the well-being of the baby are exercise, air, food, cleanliness, sleep, and clothing.

One of the first acts on the part of the doctor after a child is born into the world is to administer a smart spanking to him—for the reason that in order to live it is necessary for the child to breathe. It is absolutely essential that the little lungs should be filled with air and become expanded to the utmost. If the spanking does not have the desired effect, more effective measures are resorted to, such as plunging into alternate hot and cold baths, artificial respiration, etc. But one thing is certain—if the baby is to live he must cry, as it is only through a good cry that the lungs are expanded as they should be. When this is so necessary to life, it is not only selfish but wrong on the part of any parent to object to

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hearing the baby cry. It is only too often that the mother, in not wanting her child to cry, is simply considering her own nerves, humoring herself, and wilfully spoiling the child. Bad-tempered, stubborn, self-willed, and even delicate children are the result of this over-indulgence in infancy. The unfairness of this lack of training is shown later when punishment, corporeal and otherwise, is resorted to to subdue the strong will and naughtiness of the older child. He is not to blame for what you have made him, and under these circumstances it is wrong to punish him. It is much easier to make a right start than to wait awhile and then try to correct faults which have already taken deep root. This is valuable time lost. It is not pleasant for you, and is unjust to the child.

We will first, then, consider the cry of an infant. Let the mother not hush his cries by walking or rocking him; this is a very bad habit. Instead of quieting, on the contrary it should be a mother's duty to insist that her baby indulges in a certain amount of good, healthy crying each day.

## THE BABY

A whining, fretful cry is not a beneficial one. It must be a good, strong, hearty cry; one during which the baby draws in a deep breath and holds it for a few seconds, thus expanding the little lungs to their fullest extent. It is this which strengthens and toughens the lung tissue. A child with lungs thus made strong and healthy does not catch cold easily.

But here in the very start *moderation* and judgment must be exercised; all cries of the infant are not alike, and a mother should as soon as possible learn to distinguish them. There is, first, the cry of nature, which is strong and lusty, in the course of which several good screams are given and the child becomes red in the face; this cry is wholesome, healthy, and an important part of the baby's exercise. There is then the cry of temper or indulgence; this is when the child cries heartily, but instantly ceases when taken up, is rocked, or walked with, and is given whatever it wants and is crying for. In this case do not indulge the child, as, sooner or later, you will have cause for regret. But let him cry it out. This, once or twice

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at the most, is usually enough; you will find the cases are rare when the discipline has to be repeated. Then there is the cry of hunger, as when the child cries immediately after he has finished his food. This is rather a fretful, worrying cry, which is somewhat prolonged and frequent between the feedings; at the same time the infant will eagerly suck his fingers or part of his little fist. Again, there is the cry of pain, which is sharp and not continuous, but coming in paroxysms as the pain is felt and ceasing as the cause passes away. It is frequently accompanied by drawing up of the legs, as in colic; or carrying the hands to the side of the head, if the pain is in the ears. When a child is really ill the cry is always more feeble; the child is irritable and frets from every little cause. In not one of these cries is the child benefited by rocking, walking, dancing him up and down, administering medicine, giving food at irregular hours, a rubber or sugar-nipple to suck, or by constant amusement; if the cry be from a pain or sickness, these devices do not take away or ease the real cause; they may simply divert



## THE BABY

the infant for a few seconds, but even this is doubtful. And all this diversion is mostly at the expense of the nerves and stomach. If the mother or nurse is convinced that the cry is other than natural, the best and most sensible thing for her to do is to first make a thorough examination of the infant, and try, if possible, to find the cause, and, in relieving that, thus really relieve the child. Among the possible causes to be looked for are pins either sticking or pressing into the flesh, uncomfortable wrinkles in the clothes, colic, cold hands and feet, earache, and constipation.

The constant handling of an infant is not good for him. The less he is lifted, held, and passed from one pair of hands to another, the better, as while he is so young his bones are soft, and constant handling does not tend to improve their development nor the shapeliness of his little body. The new-born infant should spend the greater part of his early life on the bed. An occasional change of position is, however, advisable; but, in order to do this, much handling is not necessary. When

## THE BABY

the baby has lain long in one position, and perhaps become restless or tired from so doing, gently roll him over, if on the back, first on one side, then on the other; and once in a while he may lie on his stomach. In this way the pressure is not confined to any one side or part of the body, but is evenly distributed on all sides, and the muscles develop equally all over the body. When necessary to take the baby up, never grasp the body by the hands to lift him, for in so doing one is apt to make pressure over the chest and abdomen, where the most delicate organs of the body lie. It is not only uncomfortable for the child, but there is also danger of doing injury to these organs. The way to lift a baby is to grasp the clothing with the right hand just below the feet, then extend the left hand along the spine, the palm supporting the back, the three middle fingers the head and neck. In this way the infant is lifted without any part of the body feeling pressure or strain. The clothing forms a little hammock, in which the child lies perfectly comfortable.

## CHAPTER II

### FRESH AIR AND VENTILATION

**S**INCE the infant must breathe, if he is to live, it is well to consider the quality of the air which he is to take into his lungs, and it is most important from the first that this air should be as free from impurities as possible. Pure, fresh air, and plenty of it, is absolutely essential to a healthy baby. The lungs are strengthened by deep draughts of it, the blood purified, and the whole system benefited; consequently, let the baby have fresh air every hour of the twenty-four. But remember that, while the air goes into the lungs pure, when it returns it comes back laden with impurities, which it carries from the blood. And it is not healthy to breathe this same air over and over again, any more than it is clean to bathe in the same water many times. In giving

## THE BABY

the child fresh air again, be *moderate* in the manner this necessary element is obtained. In order to get fresh air, do not think it necessary to turn the baby out of doors at all hours and seasons and in all kinds of weather, as much harm may thus be done, and many colds may be caught. Many throat and nose troubles are traced to this indiscriminate turning the child out of doors, as it were. It is just as important that the new-born baby have fresh air as the older child, but he should not get it in quite the same way. The young baby should not be immediately taken out of the house and into the open air, but the fresh air can be brought in the house to him. It is well to begin from the first day, and have the air in the nursery or room where the baby is kept most of the time changed frequently. Change the air not less than two or three times a day, and do not forget that not only the baby is breathing the air, but the nurse and other persons who are in the room or who come in to see the new wonder are each one helping to exhaust this supply. This airing can be accomplished by tak-

## FRESH AIR AND VENTILATION

ing the baby from the room at stated times and opening the windows, both upper and lower sash, for a short time. If when you are ready to bring the baby back the temperature of the room is not quite the degree it should be, keep him wrapped in a blanket or afghan for a while until the temperature rises. In very cold weather another and perhaps better way to obtain the required fresh-air supply is through a connecting room, which is to be aired and warmed; then open the door which leads into the nursery. But, either way, it is well to take the child out of his nursery entirely twice a day and give that room a thorough airing.

It is well to begin early in life to accustom the infant to taking cool air into his lungs; the longer he breathes only the furnace-heated air of the house, just so much more sensitive to a colder atmosphere will the lungs become. As the baby grows older take him out of doors, and, as the lungs have already become accustomed to contact with cool air, you will have no need to fear colds. At first take the baby out for a short time only, but

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each day make the time he is in the open air longer, until he spends the greater part of each pleasant day out of doors. The days on which baby had best stay in the house and take his airing in the nursery are days when it is rainy, damp, or foggy; days when the sun does not shine, and there is melting ice and snow on the ground. If the snow is melting in consequence of a warm, bright sun shining upon it, there is then no harm in sending the child out. Babies should not go out on days when there is a strong wind blowing. Especially is this true in cities, when, with high winds, the air is filled with the dust and filth of the streets. As a rule, a young infant should not be taken out in his carriage when the thermometer is below 30°. But it would be far better to take babies out with the temperature much below this point, if the sun is shining, the air clear and dry and no wind, than on the days above described.

When the weather is not suitable for the child to go out for his usual time, or only for a short part of the day, he should have his airing in some room in the house. Put

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on his out-door wraps, and lower the windows from the top. Do not open from the bottom, as then a direct current of air may blow upon the child. In this way let the child have the benefit of one, two, or three hours' fresh air without being exposed to the inclemency of the weather outside. The age at which an infant should be taken into the open air depends entirely upon the climate in which he lives and the season of the year. In summer, ordinarily the baby should not go out until he is three weeks old. In a northern climate even then care must be taken, especially if near the seashore, where the winds are strong. It is best that even light winds should not blow upon a new-born baby. Also, at this season, driving in an open carriage is not desirable for an infant before he is three or four months old; in the winter not at all. In the spring and autumn the baby can be taken out when he is about a month or six weeks old, but a baby born in mid-winter will often have to remain in the house until spring, unless the winter be a mild one, when, after six weeks, he can be taken out on mild days

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for a little while. These instructions apply only to a northern climate. In the South, where it is much milder, under most circumstances a child can go out with safety at any time after the first two or three weeks.

While we have considered only the necessity of fresh air during the day, it is quite as important that a generous supply should be had at night. A most eminent general practitioner has made the statement "that, of the twenty-four hours, the night air is by far the purest." But we must remember that at night we do not have the sun to warm and dry the air; so it must be taken more sparingly, and in a different way, but must not be omitted altogether. The room in which a very young infant sleeps, if the weather be cold, can be well ventilated by opening a window in a connecting room, the door between the two, of course, being open, the severity of the weather deciding the question as to whether the window be opened little or much. But ordinarily, and, with older children, let the air come in through the window of the sleeping



## FRESH AIR AND VENTILATION

apartment. It is well to have two frames, as wide as the sash and about a foot to a foot and a half high, made to fit the window-frame, top and bottom. Cover these with a coarse cheese cloth or muslin. They should be fastened in the window at night, when it is opened, as they temper any strong wind that may blow in, and act as a filter to keep out dampness, soot, and dust. It is not necessary to use these screens in summer.

In summer the baby should not go out during the hottest part of the day—early morning is the best time for his airing. Take him from his bed, wash his face and hands, put a light flannel wrapper on over his night-dress, and take him out. He can finish his nap and have his breakfast out of doors. The early morning air in summer is sweet and refreshing, and a good tonic. As the sun creeps higher and the air becomes warmer you can then bring him in and give him his bath. He will then probably go to sleep again in the darkened nursery, thus affording the nurse a little time for rest or a nap, to make up for what she has lost by

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the early rising. If the weather is very warm, do not send the baby out again until late in the afternoon, when the air again becomes cooler. He can stay out during the early evening, but should always be brought in before the dew begins to fall. During the spring and autumn the character of the day should govern the length of time he is to spend in the air. If the day be fair and dry, he can stay out most of the day between the hours of 9 A.M. and 4 or 4.30 P.M. In the early spring it may not be wise to send the baby out quite as early as 9 o'clock, on account of the moisture which is caused by the frost coming out of the ground. It is, in this case, better to wait until towards noon, when the sun dries the pavement. And remember at this season to keep the baby on the sunny side of the street. In the autumn it may also not be prudent to keep him out as late as the time mentioned—4 P.M.—as there is a dampness in the air which is caused by the accumulation of fallen and decaying leaves lying on the ground. During the winter it is best to send the baby out only between the hours of 10 A.M. and 3 P.M.

## FRESH AIR AND VENTILATION

When a child reaches the age of a year he can stand much colder air than a younger infant, and when he reaches the age of two or three, or when old enough to run about and exercise, he can go out in almost any kind of weather except that which is absolutely bad, as by this time his lungs have grown stronger and have much more resistance; they are not so easily affected by moisture; he does not lose his breath in a moderate gust of wind; and his blood is not so easily chilled by the cold. Against the habit of keeping children too closely housed, or living in rooms overheated and badly, or not at all, ventilated, one cannot speak too strongly. It is not reasonable for any one to assume that the poisonous gases exhaled from the lungs are ever healthy for any one to breathe, much less an infant. If you would have your baby well developed, strong, and healthy, give him plenty of oxygen; let him have all he can get to breathe. This is true even in cases of pulmonary trouble. Children suffering from bronchitis and pneumonia stand a far better chance of making a rapid re-

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covery if the windows in the sick-room are kept wide open all of the time. In very cold weather the child can wear a cap and long flannel gown in addition to the usual clothing worn in bed. A screen may protect the child from draught, and extra covering can be used when necessary. The fresh-air treatment will be found better than medicine in effecting a cure. The germs of any disease will flourish in the impure atmosphere of a closed apartment, but will surely vanish where sunshine and fresh air come.

To live in the open air, even when the thermometer reaches many degrees below zero, is considered one of the best if not the only cure in these days for tuberculosis, the most serious of all lung diseases. Hot-house fruits and flowers are beautiful to look at, but I think there are few who will not agree that they lack the flavor, perfume, and life of those grown in the open air. And no mother can ever expect her baby to healthily develop and grow strong under hot-house conditions. In connection with the child's airing, it may be well to consider the question of wraps. As a rule, even in very cold

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weather, the majority of babies one meets on the street are entirely too warmly clad. The child who is sent out for his airing with fur rugs under him and another one over him, with fur about his cap and neck, is in a fair condition to have constant colds and to acquire chronic throat trouble. By his superabundance of wraps the pores of the skin are kept open, the surface of the body becomes moist, the child is made over-tender and sensitive to the slightest cold or waft of wind which blows upon him. He is equally liable to take cold when brought into the house and the wraps removed, for, from excessive perspiring, the clothing has become damp. Without the heavy outer garments, the moisture-laden clothes soon become cold, striking a chill to the over-sensitive little body. This is wrong. Never overwrap the child when you send him out. A moderate amount of warm woollen wraps are all that are necessary. The quantity of covering needed must be governed by the temperature outside, and it is not well for the mother to leave this to the nurse's judgment. A child should never be dressed

so warmly as to cause it to perspire, especially while it is out of doors. In our variable climate it is always well to tuck an extra wrap somewhere in the baby's carriage in case of sudden change, as cold winds spring up or a dampness may arise in a very short time, and if the child be some distance from home this wrap will prove most useful. Before the child leaves the house, always see that hands and feet are warm. Never send a child out with cold extremities, as it is very easy for these small members to become chilled. In cold weather it is well to put a hot-water bag in the carriage, not too near the feet, but a little distance from them; the heat which radiates from the bag will keep the feet and legs warm. Warm mittens should cover the hands, coming up high enough to protect the wrists. In very cold weather the hands should be tucked under the afghan or blanket. While the baby is out, remember never to let the wind blow in his face nor the sun shine in his eyes; neither allow him to lie on his back with the strong light from the sky above reflected full in the face,

## FRESH AIR AND VENTILATION

especially if the sky be somewhat overcast, as this causes a white light which is especially injurious to the eyes. Carelessness in this respect is the cause of much eye trouble, and not infrequently permanently injures the sight. Every baby carriage should be provided with a parasol, or canopy of some kind, with which to shield the infant's eyes from the sunlight and glare. The lining of such protection should be of some green fabric, which should be renewed as soon as it has faded to a pale shade. It is better that a baby should not wear a veil. In the first place, they are more or less injurious to the eyes. If worn for protection from the cold they are worse than useless, as they soon become moist from the breath. This moisture, coming in constant contact with the baby's tender skin, irritates and chafes it, and in cold days this moisture on the veil freezes, making it still more uncomfortable for the child. If the day is so cold or the wind so violent as to make a veil absolutely necessary, it is not a day suitable for the baby to go out.

## CHAPTER III

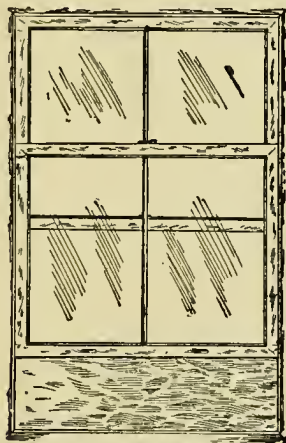
### THE NURSERY: ITS FURNISHINGS— THE NURSE

AS the nursery is the room where the baby spends most of its time when in the house, and where it sleeps at night, it is well worth considering carefully what kind of a room this should be. Any room, or the room least likely to be of use in the house, is not the room for the baby. The place in the house for this room ought to be selected with great care. In the first place, it should be where the sun shines the greater part of the day, a southern exposure if possible, an airy room, and never on the first floor, which is sure to be more or less damp. One of the upper stories of the house is best; in a city house, the higher up the better, as there the sun lingers longest and the air is sure to be purer. The room should have at least



## THE NURSERY—THE NURSE

two good-sized windows. To insure pure air, in warm weather both windows should be kept open; in moderate weather at least one window should have a sash lowered; in very cold weather it need only be lowered for an inch or two, according to the temper-



WINDOW-BOARD

ature out of doors; also that of the nursery. If the weather be extremely windy, and even a slight opening of the sash seems inadvisable, it would be well to use a window-board to secure good ventilation; this is simply a

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plain board, the width of the sash and a few inches high. By fitting this in the window, and closing the sash on it firmly, a space is left in the middle of the window where the sashes overlap, and considerable fresh air can enter the room through this space, leaving little danger of draught. This method of ventilation is greatly enhanced if there be an open fireplace in the room. Every nursery should, if possible, have an open fireplace in it, as it is a great factor in assisting in a free circulation of air. Next to the open fire comes the Franklin stove. Oil, gas, or the old-fashioned air-tight stoves for burning wood should never be used, as they not only throw off poisonous gases, but exhaust and consume the oxygen in the air. Not only should the purity of the air in the nursery be considered, but the temperature as well; these are two points to which every mother and nurse should pay strict attention. The great tendency is to have our houses too warm, and especially the nursery. The temperature of that room should never be allowed to go above 70°, and this only for a very young infant; after the first

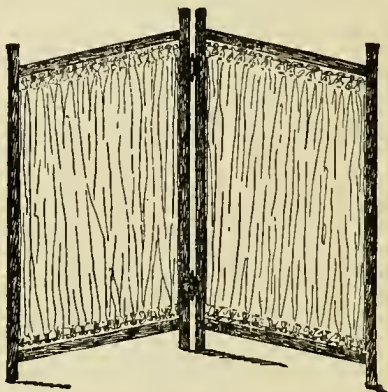
## THE NURSERY—THE NURSE

month  $68^{\circ}$ , but only for the day time; at night it may be several degrees lower. It is also important that the nursery be kept at as uniform a temperature as possible. It would be safer to keep the room at an even temperature of  $65^{\circ}$ , or even less, than to have it cool one moment and hot the next. Children brought up in overheated, poorly ventilated nurseries are usually puny, pale, and delicate, over-sensitive to cold and sudden changes, easily contracting pulmonary diseases—in fact, taking cold on slight provocation. Both the circulation and digestion of the child are affected under these conditions. It will be found that if at night the air in the nursery be kept cool and fresh, the child will sleep more soundly, and will not be troubled with restlessness, as will surely be the case if the room is hot and close.

However, be cautious in one thing. In securing your fresh air, whether during the day or at night, take care that the baby is never placed in a direct draught; do not, with the baby in your lap, sit before an open window or door, or have his chair or bed in such position; a draught can

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often be felt in windy weather between window or door and open fireplace; if a draught is felt, protect the baby by placing a screen about the chair or bed. Every nursery should be provided with a screen. A simple, practical one may be made of an



SCREEN

ordinary, small-sized clothes-horse, a small brass rod or tape running across the top and bottom, on which is stretched a curtain made of white cambric. Two sets of screen-curtains should be made, in order that they may be changed and washed occasionally.

Often, in the summer, it will be found

## THE NURSERY—THE NURSE

that the crib will need some slight protection from draughts; this can be secured by hemming strips of white cambric, and securing these by tapes around the upper part of the crib. It will be well to know, also to remember, that the temperature of the room where your head is when standing is not the temperature of where the child's bed or chair is, but is many degrees warmer; consequently it is always best to hang the thermometer low—at about the height where the baby's head is. In view of the cooler atmosphere of the nursery at night, when it is necessary to change the baby's napkin during that time do not unnecessarily expose him. A number of diapers can be folded ready for use, and placed under cover near the hot-water bag at the foot of the bed. With very little practice on the part of the mother or nurse a change can be made under the bed - clothes, and the wet diaper replaced by a warm, dry one, without exposing the infant in the slightest degree to the cold. Two changes at night will be found to be all that is necessary under ordinary circumstances.

An objection which many mothers make

## THE BABY

to having the nursery cool at night is that an older child will kick off the covering, and in this way catch cold. This difficulty may be overcome in several ways. One can pin down the blankets with strong safety pins which come for that purpose. There are, also, several contrivances sold to fasten down the bed-clothes; but perhaps the best and surest way is to take a crib blanket and make a bag by sewing up the sides. Turn down a hem at the top and run a draw-string through it; place the child in this, fasten it securely under the arms, and he can turn and twist and kick to his heart's content without danger of exposure. Be sure, however, to have this blanket-bag large enough to allow free movements of the legs, and arrange it so that no bunch of gathers will be in the back for the child to lie on. This bag is only practicable for children who are old enough not to wet the bed at night, and should not be used in warm weather. If shoulders and arms are exposed, a light flannel sack may be worn.

It has been suggested in the preceding chapter that the air in the nursery be changed every time the baby leaves it; this

## THE NURSERY—THE NURSE

excellent plan should be closely adhered to. Open the sashes a few inches, if only for a short time, as a little fresh air is better than none at all; but a great deal is much better.

Let the furnishings of the nursery be selected with intelligence and care. They should be extremely simple; at the same time, the room should be cosy and cheerful. Sanitation and cleanliness should be one of the first considerations. Running water, wash-basins, plumbing, or any apparatus for cooking should not be allowed in the nursery; all this should be arranged in an adjoining room. Napkins should not be hung there to dry; in fact, nothing should be kept there which would tend to taint the air in the slightest degree. Sour clothes or soiled napkins, on being taken from the child, should not be allowed to stand, but should be removed from the room at once. If necessary to put the napkin down for a moment, do not place it on chair or floor for even a very little while; if you do, in a short time it will result in the nursery acquiring a bad odor, and one not easily gotten rid of. At such times always have a

## THE BABY

small agate basin to use as a receptacle, or good-sized squares of stout paper can be kept at hand and utilized for this purpose.

Heavy drapery, portières which keep out the light and air, upholstered furniture, are not suitable for a nursery. If drapery is to be used at all, it should be of some light material which can be washed. The furniture, too, should be of a kind that water cannot hurt. The little chairs may be provided with cushions for back and seat. These should be detachable, and covered with slips that can be removed and washed when necessary, and the cushions themselves ought to be brushed every day. Bedsteads or cribs made of brass or of iron finished with enamel paint are the best, the latter being the most practical for ordinary use, as it may be dusted with a damp cloth each day without injury, and is very easily kept clean. Wooden cribs, or those made of reed or rattan, are not desirable, as it is impossible to keep them perfectly clean in spite of any amount of good care. Every curl and twist of the material of which they are made forms creases where dust may lodge, and remember that it is in these



## THE NURSERY—THE NURSE

particles of dust that germs of disease find a resting-place. It is well to keep both out of the nursery, if possible. The mattress should be a woven-wire one. Those made of hair, cotton, excelsior, or any of the other materials employed for this purpose, ought not to be used for infants. It is impossible to keep such a mattress in a satisfactory, clean, and sanitary condition. The proper thing to use is a heavy gray blanket, folded several times to the size of the crib. This is placed on the wire mattress, and on it a large square of nursery-cloth; this is to keep out cold, also to protect the blanket. Over this put the sheet, then a soft-quilted cotton pad for the child to lie on. This arrangement makes a bed that can be kept absolutely clean and sanitary; it can be aired every day and all day if necessary; it can be washed and fumigated—in fact, it is a thoroughly clean, comfortable, and ideal bed.

The walls of the nursery should be of hard finish, either plain or painted. Papered walls are not so healthy, as the paper absorbs moisture, retains odors, and the dust clings to it. Neither can it be washed, while

## THE BABY

a plain or painted wall may be scrubbed if necessary. Once a week it is desirable to have the nursery walls rubbed down with a damp cloth. An old, soft piece of cotton or linen cloth, fastened securely over a new broom, answers this purpose very well, although a felt brush is manufactured for this purpose. The nursery floor should not be covered with matting or carpet, for, despite good care, at best these can be only dirty and unsanitary. They cannot be washed, and when swept a good portion of the dust flies about the room, and finally settles on walls and furniture, while much sifts through the fibre, to accumulate and remain on the floor beneath. The floor should be of hard wood polished, or ordinary wood painted or covered with linoleum. These floors, with little care, may be kept absolutely clean; all the dust lies on the surface and is easily removed. If the floor is swept with a hair floor-brush—or, as a substitute, cover an ordinary broom with a bag made of outing flannel, or some soft, stout material—very little dust will arise from the sweeping process. After that the floor should be wiped over with a

## THE NURSERY—THE NURSE

damp cloth. Rugs may be placed on the floor, but have them small and light enough to be easily handled, that they may be taken up and aired every day, if it is nothing more than to give them a shaking from the window. It is a bad plan to hang many pictures on the wall. Have only a few in very simple frames, without carving, filigree, or gilt. Most children show a decided preference for pictures of domestic animals — cats, dogs, etc. Every ornament and piece of furniture in the nursery should be such that it can easily be kept clean without injuring it. Dusting should never be done with a feather-duster or dry cloth. This only flirts the dust from one place to another, without really getting rid of it. The best duster is one made of cheese-cloth. Wring this out as dry as possible from a basin of cold water; it will do no harm if a little carbolic acid, ammonia, or mild disinfectant is put in the water. The damp cloth removes and holds the particles of dust, while the disinfectant freshens the air in the room. In dusting, do not neglect any little place where dust finds a lodgment, especially

## THE BABY

behind pictures, the base-work behind furniture, rounds of chairs, etc. As far as spotlessness is concerned, let the nursery be the show-place in your house. Have nothing superfluous in it—crib, nurse's bed, a little rocker for the child if old enough to use it, one low rocker and one plain chair for the nurse, low table and chiffonier or bureau for the baby's clothes only. It is well to state here that the nurse's clothing, toilet articles, or personal belongings ought not to be kept in the nursery; a separate place should be provided for them. Have the drawers where the infant's clothing is kept dusted out occasionally. Also see that all clothing is well aired before it is put away. The garments should be neatly folded and put away in order, reserving a drawer for small articles, such as bands, shirts, and socks. Put each in separate piles, not laid in promiscuously. Have another drawer for skirts and dresses, and so on. Always know where you can put your hand on each separate piece at any moment. The baby's basket is another accessory which demands attention. It is too often an elaborate affair of laces and ribbons,

## THE NURSERY—THE NURSE

which, from constant use, soon becomes soiled and bedraggled. The trimmings should be made of washable material. Leave off the frills. It may be simply constructed and still be dainty. Have it refreshed often enough never to look mussed up, and do not keep it too full. It is not intended as a catch-all for everything that belongs to the baby. Keep in it only the things necessary for each day's toilet. After the morning bath arrange it for the night, and after the baby has been put to bed see that everything is ready for the morning toilet.

In connection with the nursery, it is fitting to touch for a moment on the subject of the nursery-maid. She should be a person preferably between the ages of twenty-five and thirty-five, with clear skin, good teeth, and a healthy and sound body. A nervous woman should never care for an infant. It is the mother's duty to look after and insist upon the personal cleanliness of the woman who takes care of her child, to know that her under-clothing is clean, to manage that time be given the nurse for frequent or daily baths, and to have the conveniences for such provided for her. While in

## THE BABY

the nursery or house, insist upon her wearing wash dresses, ample white aprons, white collars and cuffs, and a cap to protect her hair from dust. Require absolute cleanliness of person and dress, and do not allow her, especially when handling the baby or in the nursery, to wear woollen dresses, or a dress which she wears to her home, to the house of her friends, or in the street-cars.

There are many other things to be considered in a nurse, such as character, disposition, ability, etc., but among other cardinal virtues the above are qualifications absolutely necessary.

## CHAPTER IV

### THE BABY'S BATH AND CLOTHING

**A**N important part of the baby's care and training is the bath. The cleanliness which it imparts, the massage of muscles and skin which it makes necessary, the healthful glow and reaction which follow, each has its own little share in making the healthy child. Do not be satisfied with or think that a little sponging once or twice a day is all the bath a baby needs. The baby cannot be properly washed or made clean in this manner, and it is difficult to properly rinse all the soap from the skin; then, again, the child is exposed to the air too long when bathed in this way. Put the baby in the tub once a day—a good-sized tub, which will hold enough water to allow him to kick and splash and to remove all traces of soap from the skin. A baby should really have

## THE BABY

two baths a day, a full-tub bath in the morning and a sponge bath at night before being put to bed; no soap need be used with this evening bath, but a very little alcohol may be added to the water. Do not give a bath immediately after a meal; it should be given from one to two hours after feeding. The temperature of the room should be at  $70^{\circ}$  for an infant, and not less than  $68^{\circ}$  for an older child. In moving about the room making necessary preparations for the bath one naturally becomes more or less heated, consequently do not judge the temperature of the room by your own feelings; rely solely on the thermometer, and hang it on a level with the bath-tub. It is almost always best to have a fire before which to bathe the baby; it is advisable, sometimes, even in summer when there is much dampness. Before sitting down to the work of giving the bath, see that everything is in readiness, and that you do not have to get up or call for things after the bath is once commenced. The basket should stand near at hand containing safety-pins, wooden toothpicks, threaded needles for sewing bands, scissors, absorbent cotton or soft



## THE BABY'S BATH AND CLOTHING

lint cut in small squares, dusting-powder, etc. A good nurse will see that her basket is always well stocked. On a low table alongside of her she will have soap, bath thermometer, wash-cloth, small cup containing boiled water or boric-acid solution



RUBBER BATH-TUB

for cleansing eyes and mouth, a basin of water 98° for rinsing wash-cloth, also pitcher of very hot water for use in case the water in the tub gets too cool before it is time to put the baby in it. One full set of

## THE BABY

clothing may be kept in the basket, and just before the bath it should be taken out and hung over a small clothes-rack or frame, in front of the fire, to air and warm. Never put a cold garment on an infant. Place the clothes over the frame in the order they are to go on the baby: first, dress; on top of this the petticoats; then shirt, band, and diaper;

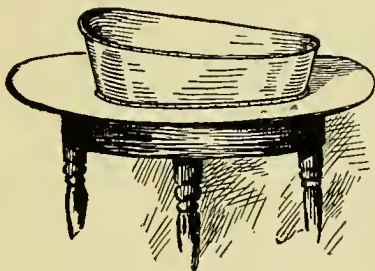


FLANNEL APRON

the little socks may be warming on the hearth. The person who is to give the bath

## THE BABY'S BATH AND CLOTHING

should wear a large flannel apron, and, pinned to the belt of this, a large, soft towel. A rubber bath-tub is best and most convenient; if you have not one of these use the



BATH-TUB AND TABLE

baby's oblong bath-tub on a low table. Be generous when you fill the tub; do not spare the water. The proper temperature of a bath is between  $98^{\circ}$  and  $100^{\circ}$ , neither over nor under, as this is the normal temperature of the body. The water should be as near this as possible, and there will be no danger of either chilling or overheating the blood. Here, again, rely upon the thermometer; do not attempt to test the water by your hand; what may seem only fairly warm to the hand may be hot enough to scald a little

## THE BABY

baby's tender flesh. If for any reason a bath thermometer is not at hand, the elbow is a fair test; do not have the water any warmer than the elbow can comfortably stand.

Now, everything being in readiness, take the baby on your lap, having turned the towel to one side so that he lies on the flannel apron. Handle him as little as possible, rolling him when a change of position is necessary, but do not lift him, as pressing the fingers on stomach and abdomen, where the delicate organs lie, is uncomfortable to the child and often injurious.

In removing a garment with sleeves, especially if it has a small opening, let the baby lie on his back; gradually and gently work the part which is under the child up as far as possible until it lies in a roll under the neck; the arms can then easily be taken from the



BATH  
THERMOMETER

## THE BABY'S BATH AND CLOTHING

sleeves without bending or twisting, and the garment slipped over the head without any discomfort to the child. When the clothing is all removed with the exception of the diaper, which is unfastened but left under the baby, cover him with the flannel apron, tucking one corner well under the shoulder nearest you. Use the water in the basin for washing. First bathe the face with clear water; then, soaping the wash-cloth, lightly wash the head, ears, and neck; rinse these with the water from the basin, and then dry, so that there will be no danger of his catching cold. This done, soap the wash-cloth well; one soaping will usually answer for the entire body. Still keeping the child well covered, place your hand under the apron and wash the chest in front, being sure to get into the folds under the arm and in the groin; arms and legs are uncovered one at a time and washed, and quickly put back under cover, especial care being taken to wash well between the fingers and toes and in the palms of the hands. Now roll the baby towards you and wash the back. With a little practice the whole body can be well washed

## THE BABY

in a few minutes without exposure to the child.

Next test the water in the tub with the bath thermometer; if it has cooled, add hot water from the pitcher until it reaches the proper degree.

Then place the left hand under the baby's back and let the body rest on your palm; extend the three middle fingers down the back, with thumb and little finger stretched from shoulder to shoulder; this will form a support for the entire body. Let the head rest on your wrist and grasp the feet with your right hand, and lift the baby into the tub in a sitting position, still supporting him with your left hand; with the right hand dash the water over head and chest and rub the baby well. The child will enjoy it. When he has been in a few moments take him from the tub, your hand still under the back, holding his feet in the same manner as when he was put in. The towel will now have fallen down in front. Wrap him up in that and the flannel apron, dry the head first, then gently pat him all over, rolling from side to side; this will be sufficient to dry the body, except in the creases

## THE BABY'S BATH AND CLOTHING

and folds, where he must be gently dried later. Never rub a baby's skin roughly with a towel; it is very tender, and a gentle patting will dry him just as well. Now dust a little powder, not all over the body, but only in the folds and where there is the slightest danger of chafing; you are then ready to put on diaper, next band, socks, shirt, petticoat, and dress.

No clothing should be drawn on over the baby's head. Run your hand through the garment, catch hold of the feet, slightly elevate the body, and draw the petticoats and dress on from the feet up; in this way they go on with much less discomfort and disturbance to the infant.

When the baby is bathed and dressed, turn your attention to the eyes, mouth, and nose; from the cup partly filled with warm water, or boric acid solution, wet a little piece of absorbent cotton or linen, open the eye wide with thumb and forefinger, and let a drop of the water fall in. Use a separate piece of cotton for each eye, for the reason that if one eye is a little sore or has pus in it the infection will not be carried to the well eye, as is often the case when but one

## THE BABY

piece of cotton is used. Wrap another small piece of cotton or linen around the little finger, dip it into the water, and gently swab inside the mouth and about the gums;

be very careful not to use much force; simply sopping it is enough to make clean. Babies' mouths are often made sore by too vigorous cleansing. Now take a wooden toothpick and around the end of it twist a tiny piece of absorbent cotton; use this to cleanse the nose; go into the nostrils very carefully and only a short distance. It is most important that the nose should be properly cleansed each morning. When this is neglected the nostrils become clogged, and a child suffers much discomfort. It interferes with his breathing, and also seriously interferes with his nursing. The toothpick and cotton are also useful in getting into the folds of the ear, where the soapy water is apt to lodge and dry. But be careful



WOODEN  
TOOTH-  
PICK

to use only a small bit of cotton, and have it wrapped well all around the end of the toothpick, so as to cover the point and keep





PLACING THE BABY IN THE TUB



## THE BABY'S BATH AND CLOTHING

it from injuring the child. The entire bath from beginning to end, until the toilet is complete, can easily be given in half an hour; during this time the child has not been exposed except for the few moments he is in the warm water, and if water and nursery are both of the right temperature there is no danger of his catching cold.

The only conditions under which the bath should be omitted are in cases of sickness or some skin trouble. Children suffering from eczema should not be put into the tub. Neither should soap be used on a child whose body is covered with prickly heat; in this latter case a cupful of bran tied in a gauze bag should be put into the water and kept there until the water has a milky appearance. It takes the place of soap.

In summer the warm sponge bath at night is especially quieting and conducive to sleep. If the child is at all troubled with heat rash, or *urticaria* (hives), a scant teaspoonful of soda bicarbonate or a very small bit of starch added to the water—just enough to give it a slightly cloudy appearance—has a particularly soothing effect.

Just a suggestion as to soap and the

## THE BABY

use of sponges. Use only the very best and finest soap made; it does not pay to use anything else. A baby's skin is tender and soft; a harsh soap will injure it. A pure castile soap is very good, but the strong, soapy odor it leaves is often an objection. A fine French soap is best, and not extravagant, as one cake, if used only for the baby, will last for months.

As for sponges, I can only say, Don't! No matter how fine or how good they are, and no matter how much care is used in cleaning them, they are still dirty. Every pore of the sponge is a cell for all sorts of refuse and germs. The fine scales and the oil from the skin cannot be properly eliminated from them, and any attempt at washing only rubs these scales and dirt farther into the heart of the sponge, where they lodge and decay. Nothing but boiling can ever really clean a sponge, and boiling would ruin it, which would be the best thing that could happen.

Now that the baby has had his bath, let us consider his clothing. Most of our American babies wear entirely too much clothing—clothing that is too heavy, and

## THE BABY'S BATH AND CLOTHING

from which they do not get a corresponding amount of warmth as compared with the weight they carry. Again, many mothers, in their desire for elegance, lose sight of what is most sensible and healthy. The material for children's undergarments is a matter for serious thought. A child is just as likely to suffer from being dressed too warmly as from the other extreme—namely, being insufficiently clad. Undergarments for babies and children should be selected with reference to warmth and lightness in weight. Those made of wool, or a mixture of wool and silk or cotton, are healthiest and most desirable, as wool seems to possess certain life and warmth not found in any other material. Next to wool comes silk. Garments made of this material are soft, smooth, and warm. Silk contains considerable electricity, which imparts a healthful glow to the skin in winter. It is cool in summer, and soothing to an irritable skin. Silk and wool garments are an excellent combination. Ordinary linen is not to be thought of for garments that are worn next to the skin; it is chilling and cold, and does not absorb perspiration.

## THE BABY

Much, however, can be said in favor of linen mesh undergarments for summer wear for children who are old enough to run about and who perspire freely. Cotton garments of a high grade, soft and thin, are better than linen in summer, as cotton is more absorbent. For cold weather, however, cotton is not good, and should not be worn by infants and young children. It is too thick and clumsy, and does not impart the warmth that their small bodies require. One invariably finds cold hands and feet, even though the infant lies enveloped in the heaviest and thickest cotton garments made. In such cases the hot-water bottle is always a necessary requisite for sustaining heat. Within the chest and abdominal walls lie the vital organs, and they need as careful protection in summer as in winter. The stomach and intestines require just as much heat to aid in the work of digestion in one season as another, and if woollen abdominal bands were worn more commonly during the heated terms there would be far less trouble from summer complaint, inflammation of the bowels, and all intestinal derangements. Woollen undergarments

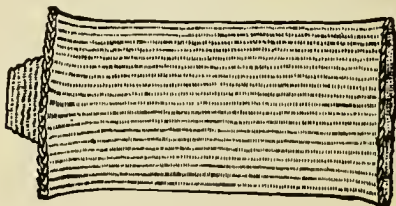
## THE BABY'S BATH AND CLOTHING

should be worn all the year round, and the quality graded according to the seasons—medium weight for winter, light for spring, and the thinnest obtainable for summer. The heaviest weight never should be used; in fact, it is dangerous for infants to wear it, as during our most severe seasons there are many days when the atmosphere is mild, not to say warm. Very thick garments at such times are too heating; they become oppressive, and tend to weaken the child and make him very sensitive to changes. Then, again, if the nursery is kept at a uniform temperature, say 68 or 70 degrees, which is only a few degrees below summer heat, why the need of such warm clothing? It will only cause the child to perspire, and then, when taken out for an airing into the cold air, the body being overheated and the underclothing damp, there is most certainly grave danger of his contracting lung trouble.

By wearing underclothing of medium thickness this danger is averted, as the child is not nearly so liable to become overheated while in the house. Then, on very cold days, an extra sacque or outside wrap may always be added, to maintain the extra

## THE BABY

warmth desired. In addition to the shirt, a child should always wear an abdominal band all the year round. For a very young infant the band is made of a simple strip torn from a piece of flannel; the edges should not be hemmed, but be perfectly plain or pinked. This band is rolled about the ab-



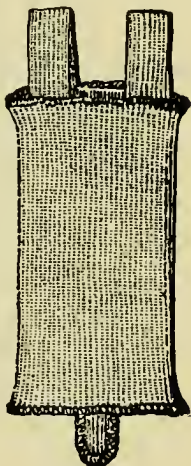
ABDOMINAL BAND

domen and fastened by sewing. Do not use pins about an infant's clothes. The supposed object of the rolled band is to prevent umbilical hernia or rupture. It is rather doubtful, however, if it is particularly useful in accomplishing this end. After the first four or five weeks this can be replaced by the ribbed or knitted band, which ought to be worn, at least, until the child reaches his third year; longer if the child is subject to intestinal weakness or disorders.



## THE BABY'S BATH AND CLOTHING

As there is much difficulty experienced in obtaining very thin underwear, that made of a mixture of silk and wool or cotton and wool is recommended for summer use. Even these are not easy to find in the shops in this country. In England they are more common, as there they are manufactured especially for the East Indian trade. When the gauze weight is not obtainable, I would advise leaving off the shirt entirely during the warm weather and letting the child wear only a band of medium weight. It should be quite long, with little straps at the shoulders to keep it in place. With this band both chest and abdomen are well protected, and if a sudden coolness arises which makes it seem advisable to protect the arms, a light sacque can be worn. The flannel petticoats should be of two grades, medium for cold weather, light weight for



THE BAND

## THE BABY

summer. The former should be entirely of flannel, waist-band and skirt of one weight; for summer the band may be made of fine cambric. Several flannel sacques of varying degrees of thickness, two or three square flannel blankets, and one or more eiderdown comfortables should be part of the baby's outfit. There is more warmth in one eiderdown comfortable than in two double woollen blankets, which makes them a most desirable night covering for infants. Lightness combining warmth should be carefully considered in the baby's wardrobe. The baby's clothes should not be worn too tight, neither should they be too loose. Tight-fitting garments should never for a moment be tolerated. Especially may this be said of the band. If this is bound too snugly about the child, the organs are crowded from the places where nature has placed them and intends them to lie. Tight binding not only impedes the action of the lungs, but is often the cause of vomiting in young infants. On the other hand, loose, flowing garments, while perhaps not dangerous, are most uncomfortable. They do not cling close enough

## THE BABY'S BATH AND CLOTHING

to the body to give sufficient warmth. It is almost impossible to keep loose clothes smooth; they work up and wind about the little body in a most disagreeable way, especially if the mother is young and inexperienced in handling babies, or the nurse is awkward; and the poor baby lies much of the time in a bed of wrinkles, which crease and seam the tender flesh. Moderately snug-fitting clothes are the perfect ones for infants and children, garments which will admit of easy movements and free circulation, and at the same time afford a moderate amount of support to the chest and abdominal muscles. I repeat that pins should never be used to fasten a baby's clothing. The band, which should be just snug enough not to wrinkle, should be fastened with needle and thread; roll it first, then start to put it on at about the centre of the abdomen; hold it firmly there by placing the left hand flat on it, and with the right hand roll it about the body. It should end and be fastened under the arm; if it ends in the back the child will have an uncomfortable seam to lie on. The shirt is put on next. Most woollen shirts

## THE BABY

are made with a little piece attached to the bottom in front, to which the diaper is pinned. This prevents the shirt from working up about the body, also keeps the diaper from slipping down. If the shirt has not this little attachment, a piece of broad tape may be sewed on to answer this purpose; it is not a bad idea to have a piece both back and front. The barrow-coat, or petticoat, should be fastened in the same manner as the band, or tied with tapes instead, if need be; it should also have a shoulder-strap of soft silk braid about a half to three-quarters of an inch wide.

The baby's dress is prettiest when made of soft, white material, such as nainsook or dimity, without trimming, unless it be a little lace or fine embroidery at neck and wrists. A few fine tucks may be made, or a little hemstitching; but embroidery, ruffles, etc., are out of place for this very young and innocent morsel of humanity.\* Do not make the clothes too long; to barely cover the feet is sufficient. All that hangs below the feet is only an additional weight for the baby to carry, and will drag on the little feet and legs. There is no

## THE BABY'S BATH AND CLOTHING

danger of these members suffering from the cold if properly clad in long stockings and bootees, the same as you would provide for an older child. Long clothes interfere with the free movements of the legs. If you want the muscles of the lower extremities to develop and grow strong, you must allow them to be active, which they cannot be if held down by a quantity of heavy clothing.

"Shall my child wear stockings or socks?" is a question which is very often asked. Well, while no harm may come from wearing socks in warm weather, and the little, chubby, bare legs are very pretty to look at, in a climate as changeable as ours the wearing of socks is attended with some risk. In cold weather it is positively unsafe. The extremities should be kept warm, especially the feet; there is no doubt that many colds are contracted from this unnecessary exposure of the child's legs. I would advise to set aside looks, consider the comfort and health of the child, and cover his little legs with good, long stockings.

As for shoes, clothe the feet of your little

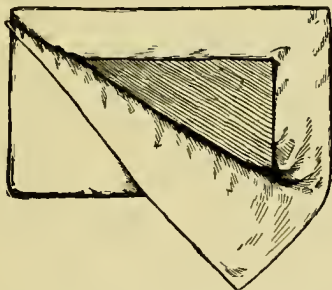
## THE BABY

one first with warm, knitted bootees, later replace these with soft kid ones, and, when old enough to walk, let him wear shoes of fine kid or leather, with a soft, flexible sole and no heel. Have the shoes broad enough to give all the toes full play. Carefully avoid anything that borders on a narrow or pointed toe, as it not only crowds the little toes into a small, uncomfortable space, but is too often the source of painful corns. Be sure, also, that the shoes are quite long enough; it is better to have the shoe a whole inch too long than to have it a sixteenth part of an inch too short. Many adults are great sufferers to-day, having incurable deformities of the feet caused by wearing, when children, shoes too short for them.

The baby's diapers may be of stockinette, cotton, or linen, the former being slightly preferable, as it is somewhat warmer and more absorbent. It is well in cold weather to fold a square of the cotton-flannel once in the middle, not triangularly, place in the fold a small square of thin mackintosh cloth or prepared fabric which is impervious to moisture, and

## THE BABY'S BATH AND CLOTHING

fasten this about the baby's thighs over the diaper. This need only be worn when the baby goes out, and will be found to be effectual in keeping petticoats and clothing dry; it is also useful at night, serving



FOLDED DIAPER, SHOWING PROTECTIVE SQUARE

the same purpose. The protective square should be small — only large enough to reach from thigh to thigh.

In making and procuring a wardrobe for her baby, let the mother's first and only thought throughout be his health and comfort. She should also study simplicity. Simple and comfortable garments need not necessarily be ugly; prettiness and daintiness need never be sacrificed;

## THE BABY

and for those in humble circumstances, it might be added, neither does material matter, whether it be fine or coarse, so long as it is always clean and spotless.



## CHAPTER V

### SLEEP AND AMUSEMENT

EVERY healthy child should be a good sleeper. If he is not, there is something decidedly wrong in that particular infant or his mother. Most probably he has been given a wrong start in life. For the first few days of his existence a new-born babe ought to sleep most of the time. As the child grows older the sleeping hours during the day gradually diminish; the hours of night sleep should, however, remain the same—about twelve hours. By the time the child reaches the age of one year, from two to three hours' sleep in the daytime is all he will indulge in, usually in two naps. As he grows still older the sleep will dwindle to one nap in the middle of the day, which habit should be kept up, if possible, until the child is four or five years old.

It is wisest to start with the baby on

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his very first day and train him in regular sleeping habits. Habit and regular feeding hours go hand-in-hand in producing proper sleep and health. Much sleeplessness in babies is caused by indigestion. This does not always mean that the food is wrong, but very often that it is wrongly administered—given to the baby at irregular intervals and in irregular quantities—thus causing pain and discomfort, which interferes greatly with healthful sleep. Consequently, establish at once regular and systematic feedings. Do not omit or defer giving the baby his food at the regular hour because he happens to be asleep; wake him; it will not do the slightest harm, and he will soon fall into the habit of waking when that time comes. A very young infant should be fed twice during the night; at the age of four or five months, not more than once—the 10 P. M. feeding. Thus are good sleeping habits at night formed. Constant nursing or feeding at night is bad for the baby. He should never be allowed to sleep at the breast, or to have the bottle to suck whenever he wants it. The sucking of the fin-



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gers, the so-called "mother's comfort," supposed by some persons to quiet babies, or any other device is not needed to induce sleep in a healthy, well-trained infant. It is entirely unnecessary to coax sleep in any way; rocking, walking, singing, lying on the bed with the child, patting the bed or pillow, as many mothers say they have to do, and all other tricks are wrong and have a perceptible effect on the small infant's nerves. After the baby has been fed and made comfortable, place him in his crib, and do not fuss about him. He may not shut his eyes and go to sleep at once. What of it? He probably does not want to. He would rather look about him for a little while and make acquaintance with the objects in the room. He may even indulge in a cry. His lungs need a little exercise. Do not check these harmless amusements in which he indulges. Do not, either, the moment the baby is put down for his nap, think that every sound must be hushed. This is the time for the mother or nurse to perform many little necessary duties, not on tiptoe and with bated breath, but in a natural manner. The

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baby will from the beginning become accustomed to ordinary household sounds, conversation in the same room, etc., without being in the slightest degree disturbed. It is the unusual or sudden sharp sound coming out of profound stillness which disturbs, whether the child be asleep or awake. At night there is no excuse whatever for wakefulness if the mother is sensible, and early commences the forming of proper habits. Arrange, if possible, to have the evening nursing come at 7 P. M., or as near that hour as possible, but never later. Half an hour, or more if need be, before this time commence preparations for the night; see that everything which may be needed during the night is in readiness. Take off the baby's outside garments and bathe with warm water, the face, neck, and chest, and such parts of the body as can be conveniently got at without stripping the child. Then put on the night wrapper. Examine all the clothing well. See that it is comfortable and smooth, and not a wrinkle for the baby to lie on and grow restless; that the bands are comfortably loose, and that there are no pins anywhere pressing into

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or irritating the tender flesh. The hands and feet must be warm, and the diaper dry. Now put the baby in its crib, and in cold weather be sure to slightly warm the sheets before he is put between them. Attend to the ventilation; turn down the light; give the baby his bottle, and stand by to see that he does not lose it or go to sleep before it is half finished. When he has emptied it, take the bottle away and leave the room. If the child is a nursing baby, nurse him before putting him to bed; there may be a little struggle or crying for one night, possibly two, but not longer. If at any time the baby wakes and cries, do not hurry to him at once; wait a few moments and see if he will not fall asleep again. But if the crying persists, go to the nursery and look the baby over carefully for any signs of discomfort. He may be wet; his hands and feet may be cold. If, after a careful examination, no cause for the crying can be found, change his position by turning him; then leave him and let him cry it out. The struggle, as has been said, will be a short one; in a night or two the habit is formed, and the chances are that there

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will never be another one of this kind. It is much better to have the struggle at this early age than to wait until the child is older, as he is then more stubborn and his will is stronger. If you wait, it will be much harder for the child and for yourself.

The following suggestions may be followed by the mother with perfect safety, and are important, if not absolutely requisite for the well-being and health of her infant. A baby should never sleep with an older person, or, in fact, with any one, but should have a crib to himself. When the child is put to bed with the idea of sleep, darken the room and have it well ventilated and cool. Do not make preparations for retiring in the same room where the baby sleeps, neither turn up the light nor take the child from the bed to feed or change him; if you do, there is danger of his becoming thoroughly awakened; both can be done in the bed with dim light and with very little disturbance to the child.

Let the infant lie with his head low. For the first few weeks a folded pad or small blanket placed beneath the sheet at the head of the bed is all that is needed; after this a



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flat hair pillow; feathers are rather apt to be heating. If baby is restless, or a little feverish from some slight disorder, a warm sponging of the entire body will usually quiet and soothe him; but do not, under such circumstances, or, in fact, for any reason, give soothing syrups or quieting drugs; they simply quiet for the time, and when the effect passes off leave the baby weaker and more excitable. Never give drugs without the advice of a physician.

The light once turned down and the child in bed, do not allow visitors in the nursery, no matter whether the child is sleeping or awake. Lastly, and very important, be most careful about exciting the little brain to too great mental activity during the wakeful hours of the day, especially the hours just before bedtime; excessive amusement will excite the rapidly developing brain and cause wakeful hours.

The new-born infant needs absolutely no amusement whatever. The brain is more carefully protected in its case of bone than any other organ in the whole body; this alone would naturally lead us to believe

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it the most delicate. Scientists and physicians tell us that the brain grows faster during the first year than at any other period. With these facts before us, why try to force this rapidly developing and sensitive organ faster than nature provides? For one year, at least, do not urge or overtax it. It is far more important that training should commence before amusement; the latter starts in such small and subtle ways that many a poor young mother is deep into it before she realizes it has had a beginning, or that such a small beginning could have such direful results. It is usually as follows: There is a little cry, then the first act commences; the infant is picked up and swayed to and fro several times. This has the desired effect, but at the same time the brain has been stimulated for a new desire, and the next time he cries he not only expects what he was given before, but craves a little more, and he is going to scream until he gets it, so he usually gets what he wants at this tender age. It is not long before merely taking up does not satisfy him; this form of entertainment has lost its novelty for the over-stimulated brain;

it craves something new and still more exciting. Rocking is then introduced by way of change, patting, dancing up and down, walking, talking, rattles, noisy, squeaking toys, anything that will keep the baby quiet, follow each other in rapid succession. By this time the little brain is so overworked that the poor baby is in a highly nervous state. Poor baby, has he no rights? In this case his only one seems to be the right to submit, and, at an early age, succumb to nervous prostration—a peevish, unhappy little thing. Surely no adult could stand a like amount of strain. If from the first the infant is left to supply his own amusement, you may be quite sure this state of affairs will never exist; he will be extremely moderate, and move no faster than the normal brain dictates. To eat, sleep, cry a little, and be let alone is all the new-born babe asks; soon he will begin to see things and find amusement in looking about the room, or following moving objects with his eyes; after a while he will laugh and crow, discover that he has fingers and toes, and delight to play with them by the hour. He is never immod-

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erate in his little dissipations, never taxes his brain beyond its power of endurance; it is only when the adult steps in and urges him on that he goes beyond his powers. It is the adult who does not know when the limit of endurance is reached and when to stop, but, being entertained and amused by the cunning little ways, quite forgets that the baby's strength is still feeble, that the brain is just beginning its activity and development, and is still weak from lack of exercise.

From earliest infancy the child's own resources should be allowed to develop, and the interference of the adult should be so infrequent that when it does occur it will come as a treat to the child, and will be something to look forward to from day to day with expectancy and pleasure. It is the pleasures that come but seldom in one's life that are most enjoyed and appreciated; the ones that occur every day, or with clock-like regularity, soon pall upon one and cease to be pleasures. By constantly amusing and entertaining the infant his brain is being over-stimulated, all his nerves are being brought into constant

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activity and made to respond to man's superior force, strength, and endurance. Each nerve becomes as an electric wire, emitting spark for spark by contact.

One would not expect an infant of a few weeks or months to walk and talk, or to be physically as well developed as a child of several years. Why, then, should we expect the brain, the most delicate and sensitive organ in the whole body, to develop so much faster than any other member? It is neither right nor safe to force it. It is far better to allow the baby to take his amusement and mental development into his own hands, at least for a while; he will not go beyond his powers of endurance, and the progress will be slow and sure as the child grows older. Very little amusement outside of his own resources will suffice for him at first, as for instance, taking the baby into another room, where he will find new objects to attract his attention. When old enough to sit up, looking out of the window opens up a new world for him. But let the baby find out the wonders for himself; do not keep continually forcing different objects upon him, or he

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will soon tire of them. As the child grows strong and can hold things in his hands, a soft ball of bright color, a rubber toy, or perhaps a bright picture or two, are all he needs for perfect enjoyment; do not make the mistake of forcing numberless toys of endless variety upon him. For if this is done he soon becomes tired; he is surfeited with amusement, and cares for none of them. A child is much happier with one simple object of amusement, one with which he works out the play according to his intelligence and capacity, than he is with a dozen more elaborate toys far beyond his comprehension, and with which the adult tries to amuse him. The writer has seen a convalescing child of little over a year play by the hour, in perfect contentment, with a little fluff of cotton left on his crib; this form of entertainment satisfied the child for many days, when many other attempts at amusement on the part of the nurse, and an endless variety of toys, had failed to attract the slightest expression of pleasure or interest. The child, if left to himself, will invent numberless methods of getting pleasure out of the simplest agent,

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and will work with the greatest deliberation and without undue excitement.

As the physical development goes on still further, the child becomes more active, runs about, and resembles a machine of perpetual motion; his mental activity also increases. Surely now he does not need to be entertained or urged on still further, but he does need intelligent restraining, and the little mind must be amused and trained while being taught. The child at this age requires more variety than the infant; there is often a surplus energy which must be made use of and worked off, and a good romp or play is a most healthful way to do this. But romping and exhilarating exercise must be indulged in during the early part of the day, and all mental activity and excitement should be gradually dropped as evening draws near. Violent playing or exercise should not be indulged in just before going to bed, otherwise the child will not go to sleep readily; he will be restless, and have disturbing dreams.

The babies who from birth are constantly amused, whose every wish is gratified, and who are continually entertained by some

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older person, are usually nervous or dull as they grow up, and are rarely happy boys and girls. This is because they simply lack properly developed resources of their own.

There should never be such a thing as a nervous baby or child. When a mother makes the statement, as so many do, that her baby is very nervous, that "he was born so, and, consequently, needs most careful watching and humoring," it reflects very much on that mother as a woman of intelligence and good judgment. The infant is not born nervous. It is true he may be born of nervous parents and with nervous tendencies; but because there is such a tendency, is this any reason why it should be nourished, carefully tended, and cultivated as though it were a thing to be desired? Is it necessary to continually add fuel to the fire? No, most emphatically no. Instead of this, every means should be employed from the beginning of life to quiet and eliminate any such tendency. These children born of nervous parents are, above all others, the very ones who should be most carefully guarded from all



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kinds of excitement in the way of constant amusement and humoring.

A nurse for such children should be most carefully selected, not for her powers of entertainment, but for her calm and quiet manner. She should be a person absolutely healthy and without nerves. A nervous or excitable person should never undertake the care of children or babies, as little children, especially delicate ones, are most susceptible to either a quieting or a nervous influence.

After a child has passed its second year, as much of the child's amusement should be out of doors as possible. Leave the nursery and its toys for rainy days. In providing amusement for the children as they grow older, it would be well to observe a little the methods of the Germans. In every German city, no matter how small, you will find the city dotted with small and shady parks. Every park has several clean beds of sand, and here the German nurse brings her little charges for amusement. The children make for the beloved sand-beds the moment they enter the park, while the nurse keeps one eye on the child, the other

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on her mending or knitting. Here one sees numbers of little children, varying in age from the tiniest toddler to the child of five or six years, each one intent on working out its own individual scheme or form of amusement. The contented, happy little faces, the little shouts of delight when some cherished idea or plan is worked out, whether it be a pie, a bridge, a landscape, or merely a hole in the sand, all show a pleasure so keen that it is to be very much doubted if any toy or number of toys invented by man for a child's amusement could ever produce so much delight. The minds of children in Continental Europe are rarely ever forced; one almost never sees a toy which requires the brain of a child ten or or twelve years old to manipulate or understand in the hands of a child three or four years, or even older; a child in these countries grows to his amusement, as he does to his education, by degrees.

When a child is old enough to enjoy books and to have stories read to him, be careful in selecting them. It is an incomprehensible fact that the average adult, in choosing

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pictures, rhymes, and stories for children, almost always picks out those which abound in tales of the naughty and mischievous doings of children, and the harrowing things which happen to them. They also tell of wicked giants, and cruel relatives who leave "babies in the woods" to starve and die. These stories are abominable, and leave most vivid and lasting impressions on the active brain of the child.

It is hardly fair to the child, with his rapidly developing mind and vivid imagination, to make these examples of wickedness and wrong-doing most prominent, and then expect the child to gain his knowledge of what is good and right from them; neither is it reasonable to fill the child's mind with examples of the other extreme—the goody-good creatures who never existed, and are so unnatural that even the child has some doubts as to their reality. In the whole scheme of amusement for the child, his play, games, story-books, etc., from the earliest moment of reasoning, let plain, sensible good be the guiding key-note, simply because it is right. Habit is so strong that, if the child is originally

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started and afterwards guided aright, he will naturally grow in that direction.

Children should be allowed to see strangers and mingle with their elders often enough to be perfectly natural and unaffected with them ; but it is a very bad habit to exhibit the children and display their talents and wise ways, and admire them when they are brought into the presence of their elders. There are few things more ruinous to a child's character.

## CHAPTER VI

### INFANT FEEDING

IT is estimated that about two-thirds of all children die before reaching the third year, also that most of the sickness in infants is due to improper food; from this it can readily be seen how important it is that an infant should have a right start in life with the right kind of food, intelligently administered and prepared.

#### *The Breast-fed Baby*

The first three or four months of a baby's life are telling ones, and mean much for the future health of the child; the food which nature provides for the baby is human, or mother's, milk, and it is the duty of every mother who has the health and well-being of her infant at heart to nurse him, or at least make an attempt to do so.

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This calls for some self-denial on the part of the mother; for if she would successfully nurse her baby, her hours will have to conform to his, and for a time her freedom and pleasures must in a measure be laid aside, in order that baby's meals may be given with the frequency and regularity that his well-being demands. But the mother's relief from the anxiety and the serious results which oftentimes accompany the first attempt at artificial feeding make these small sacrifices on her part worth while. They are worth while not only on account of her infant; she too reaps material benefit, as the woman who nurses her baby regains her usual shapeliness of figure in a short time and is much healthier than the woman who does not nurse her child. When a woman does not nourish her infant the uterus does not properly contract after childbirth, which causes the abdomen to become large and the symmetry of the figure is lost, never to return.

Women suffering from any organic disease, those who are very delicate, or who are given to violent outbursts of temper, should not nurse their children;

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otherwise an attempt, at least, should be made to do so. The nursing mother should have a liberal diet of good nourishing food, which does not, in any sense, mean to over-eat. Very rich food, alcohol, or tea and coffee to excess should be avoided. If the diet to which the mother has been accustomed before the birth of her child satisfied her hunger, nourished her, and did not cause any digestive disturbance, there is no need for any special change. Food which agrees with the mother will not, as a rule, affect the child through the milk. If the nourishment is scanty, does not seem to agree with the infant, or he does not thrive as he should, it is well to observe the following general rules.

A nursing mother should have abundance of fresh air, with a moderate amount of exercise. She should have three hearty meals a day, served at regular hours. The meals should consist of simple but nourishing food: meat not more than twice a day, plenty of fresh vegetables, eggs, and cereals. Coffee and tea should be indulged in sparingly—not more than one cup of each once a day. It is better not to drink tea and

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coffee, but, instead, drink a large cup of cocoa at each meal. Cocoa is a great producer of milk. As a certain amount of fluid is desirable, a glass of milk taken early in the morning and just before going to bed will be found beneficial. A good-sized pinch of bicarbonate of soda in the milk will render it more digestible. It is also necessary that there should be a free movement of the bowels once in twenty-four hours. In order to accomplish this without the aid of medicine, it is advisable for the mother to drink thin yellow corn-meal gruel. A large bowlful of this gruel, well salted, taken between meals, will be found most helpful, as is also a porridge made of equal parts of graham flour and oatmeal.

It is essential that a nursing mother have a large amount of rest and sleep at night; she cannot keep late hours, and do justice to herself or to the baby. Trouble, worry, fright, fatigue, and temper will surely have a bad effect on the infant through the nourishment received from the mother. If the general conditions are apparently what they should be, but the infant is not thriv-



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ing, do not hasten to make the change from breast to cow's milk or infant's foods; the trouble is usually due to some slight cause which can be easily remedied.

Frequently it happens that the mother's milk is too rich for the newly born or very young infant; this will cause vomiting, colic, and thin gum stools. This trouble is one very easily overcome, by giving the baby from one to two tablespoonfuls of boiled water or thin barley gruel immediately before putting him to the breast, and then allowing him to nurse only from ten to fifteen minutes, according to the amount of water or gruel taken. It is also well to have the mother's milk examined, and if it is too rich she should cut down her diet for a short time and take a little more exercise. In a short time matters will adjust themselves: the baby's stomach will grow stronger, and he will be able to digest the high fats, or the mother's milk will become less rich, and better suited to the baby's stomach.

If the milk is scanty and a child not getting enough food to satisfy him, he will draw at the breast ravenously for a short

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time, then stop and cry, or he will cling to the breast as long as he can and scream when taken away. Underfed children cry a great deal, and are continually sucking their fingers. High fever, too, often accompanies a starvation diet, especially in the early weeks of infancy. The way to find out whether a nursing baby is obtaining enough nourishment is to weigh him immediately before and after a nursing. The increase in weight shows how much food the child has taken. It is also well to have some milk pumped from the breast and examined by a chemist, to find out whether it contains enough substance to nourish the infant; for it occasionally happens that while there is an abundance of milk, the quality is so poor that the child cannot thrive on it. If it is found that the child is not receiving enough food to gain on, his daily diet must be supplemented by one or more bottle feedings of cow's milk. Every effort must be made to keep up the mother's milk also, to increase and improve its quality. This may be done by relieving the mother of all cares, and giving her good food and plenty of fresh air.

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During the first day or two after birth the nourishment a child gets from the breast is not milk, but a substance called *collustrum*, which acts on the bowels as a mild cathartic, clearing out the intestines of the substance they contain at birth. For this reason, during the first forty-eight hours after the birth of the child the mother's diet should be rather light. When nursing her baby the mother should sit in an upright position, bending slightly forward, and with her finger keep the breast from pressing against the baby's nose, as it interferes with his breathing. The nipples should be bathed before and after nursing, and also the baby's mouth. One breast, alternating, should be emptied at each feeding, unless the milk is scanty; then both breasts can be nursed. When there is an abundance of milk and the infant does not empty the breast at a feeding, a breast-pump should be used to draw off the rest; for if this residue is allowed to remain, the breast is liable to cake. According to the age of the baby, he should be allowed to nurse at two to three hour intervals, and not longer than twenty.

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minutes at a time. The most common cause of sore and fissured nipples is allowing the baby to nurse at will and to remain at the breast for an indefinite time.\*

It is essential to give water between feedings—a teaspoonful or more of boiled water, according to the age of the child. It is also advisable to commence early in life to give one bottle-feeding a day, gradually making it two, and later three, meals of cow's milk a day. This is done chiefly to avoid trouble in case the mother should for any cause have to suddenly wean her baby; she can do so with a certain feeling of security, as the child's stomach has become accustomed to another food. It also gives the mother a little time for often much-needed rest or recreation.

The bottle-feedings, when there are more than one, should not come together; one or more breast-feedings should intervene. At about the eighth or tenth month the average mother should commence to entirely wean the child from the breast,

\* For intervals of feeding, see p. 103.

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and the child by the tenth month, should be able to digest whole milk, provided his stomach is gradually brought to it. A small amount of food can be given, too, at the tenth month, if judiciously planned.\*

### *The Bottle-fed Baby*

When, for some reason, the mother's milk fails, or she is unable to nurse her baby, the thing to do is to provide a substitute as near like it as possible. The basis of an artificial food for an infant should be the fresh milk of some animal. In America, as cow's milk is about the only milk that can commonly be obtained, it is the only one that will be considered. As the milk of the cow is much stronger in some of its elements than mother's milk, it has been the work of some of our best physicians, after careful study and experiment, to change the quality of one or more of these elements without changing others, thus bringing it to the constituency of mother's milk, and adapting it to the use of infants. The process of changing

\* See p. 103.

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one or more of the ingredients of cow's milk, and adjusting it to an infant's digestion, is called modifying milk, and the food so prepared is called *modified* milk, *adapted* milk, and sometimes *humanized* milk. Every housekeeper knows that milk varies in richness, so it is quite impossible to give the composition of milk in any but general terms. The milk of all animals is composed of fat (butter)—this is almost all found in the cream—proteid (curd), sugar, mineral matter, and water. In cow's milk the proportion is as follows: Water, 87 to 88 per cent.; proteids, 2 to 3 per cent.; sugar, 4 to 5 per cent.; fat,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  per cent.; mineral matter, 0.7 per cent. These figures represent the composition of average milk, but may differ widely in different breeds of cows, some yielding much more cream than others. There are a number of other ingredients, which, although undoubtedly of importance, are present in too small quantities to be considered. Fat and sugar are the fuel foods, which furnish heat to the body, energy to the heart, and the power to the muscles necessary to move arms, legs, and other

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parts of the body. They also form about five-sixths of the solid ingredients of mother's milk. The proteids (curds), which are similar in composition to lean meat, go to form the muscular tissues of the body, while the mineral matter goes chiefly to form bone and teeth. The quantity of fat and sugar in cow's milk is about the same as in mother's milk, but the quantity of proteids, or muscle food, is about four times greater in the former than in the latter. The proteids of cow's milk form coarse, solid curds, while the proteids of mother's milk form soft, flaky curds in the stomach. The cow's stomach is accustomed to coarse, tough food, like hay and grain, while the human stomach is accustomed to soft food, which is usually cooked and chewed. As the calf grows about four times as fast as a baby, it could hardly be expected that cow's milk, that was intended for a calf's stomach, would answer for a baby's.

The milk of one cow is not as good as the mixed milk of several or a herd of cows. The milk of one individual cow is apt to vary from day to day, even from milking to milking. This is entirely overcome

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when the milk from a number of cows is mixed, as in this way milk quite uniform from day to day is obtainable. The milk should be strictly clean, as a large part of the sickness of infants, especially during the summer months, is caused by dirt which gets into the milk during milking. This dirt is full of bacteria or germs. Some of these germs are the ones that produce acid and are the cause of milk souring; others produce the delicate flavor of butter or cheese, and still others cause vomiting and diarrhœa; these latter are usually the germs caused by stable filth, which drop into the milk during the process of milking, and produce substances called toxins, and are really poisonous to the infant. No matter how careful the milker, or how clean the cows are kept, some germs will get into the milk. Fortunately, these germs do not develop rapidly in cold milk, so, by cooling the milk as soon as it is milked, their growth is almost completely retarded. This fact has been most satisfactorily demonstrated by eminent chemists recently. This cooling process, however, must be done immediately after milking; if de-



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layed, the milk will soon be teeming with bacteria, as the warmth of new milk is very conducive to their growth, and causes them to multiply very rapidly. The germs of typhoid and other infectious diseases that are sometimes found in milk seldom come from the cows themselves, but from the person who milks, or from impure and dirty water used in washing dairy utensils. Pasteurization is the only means of getting rid of these germs. The best milk is obtained by having the cows kept thoroughly clean, the milker to have clean hands and clothes, and milk mixed and cooled to below 50 degrees Fahrenheit, and as soon as possible after milking put in quart bottles and kept cool. To prevent contamination, milk should be carefully bottled and sealed at the dairy, and served direct to the consumer in the same glass bottles. Milk that is sent to the city in bulk, then bottled by the dealer and served to customers, is not fit for an infant's food. Milk to be used for babies should never be kept in open or tin vessels, and should not be left uncovered in a refrigerator where meats, vegetables, and various other things are

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kept. Do not use preservatives of any kind; pasteurization or sterilization is the only means of preserving milk. I will describe this process later.

### *To Modify Milk*

As has been stated before, fat and sugar are found in about the same proportions in cow's milk as in mother's milk, but there is four times as much proteid (curd) in the former as in the latter. As the infant does not grow as rapidly as the calf, it does not require nearly as much of this proteid, or muscle food; consequently it must be reduced without reducing the fat and sugar. One of the first things to be considered is how to do this. If plain milk be diluted, while the proteid is reduced, so is the fat and sugar, which, of course, is not desirable. It is necessary, therefore, to start out with a milk which is richer in fat than plain milk. In some of the large cities there are laboratories where physicians can have an infant's food put up on a prescription, the same as medicine at a drug-store; but the expense is con-

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siderable, thus putting food prepared at a laboratory out of the reach of a large majority. The food for most infants will have to be prepared in the home from cow's milk, so the mother should know how good milk can be produced, how to care for it, and how to modify or adapt it to her infant's digestion. Various methods of doing this have been followed, and mixtures of cream, sugar and diluted milk have been introduced, some taking the names of the doctors who introduced them; but these methods have all been more or less complicated and hard to follow. Within the past year or two improved and simpler methods have been devised, which make modification of milk at home a comparatively easy matter.

.. When milk is put up in bottles at the dairy the cream commences to rise immediately, and usually by the time the milk is delivered to the family a distinct layer of cream can be seen in the upper part of the bottle. This cream contains nearly all the fat that is in the quart of milk; the fat, being lighter than the other ingredients, rises, of course, to the top. The other ingredients, however, remain the same; they neither

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rise nor separate, consequently are in the cream in the same proportion as in the plain or whole milk. So cream is milk, containing the same amount of sugar and proteid as plain milk, only very much richer in fat. The relation of cow's milk to human milk stands about in this proportion: Cow's milk, 4 per cent. fat, 4 per cent. sugar, 4 per cent. proteid; mother's milk, 4 per cent. fat, 7 per cent. sugar,  $1\frac{1}{2}$  per cent. proteid. Now, by using the top nine or ten ounces of bottle milk, which has stood long enough for the cream to rise, we get a milk that is three times as rich as either plain cow's or mother's milk. By taking fourteen or fifteen ounces of the top milk, we have milk only twice as rich in fats; by diluting this top milk with boiled water or gruel, and adding a little sugar, we have a food closely resembling the human milk. The object in modifying cow's milk, it will be seen, is to make the infant's food contain the heat-producing and tissue-building ingredients in about the same proportions as are found in mother's milk. This process consists in selecting clean milk, removing a portion from the top after the

## INFANT FEEDING

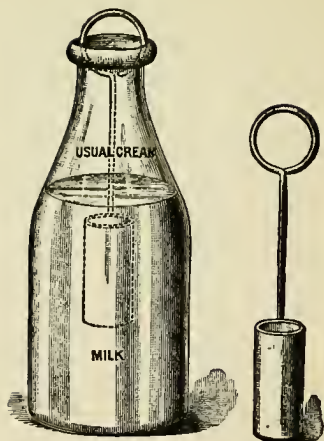
cream has risen, then diluting it and adding sugar.

Order from the milkman bottled milk; or, if you have your own cow, observe the rules for cleanliness, cooling, and bottling that are given earlier in the chapter. When the cream line shows distinctly, which it does if allowed to stand in a cold place overnight, remove from the bottle the top nine, fifteen, or twenty ounces, as it is called for in the food mixture the baby is to take. This can be easily removed by a one-ounce tin dipper,\* as shown in the illustration on the following page. The first dipperful will have to be removed with a teaspoon. Always dip out the amount called for in a food formula, as a less quantity would be too rich in fat, and may upset an infant's digestion. What is not used can be put back in the bottle.

There has been considerable discussion among physicians as to what milk should be diluted with; some use boiled water, others gruels, and still others digested gruels. It is now conceded by leading authorities that

\* A one-ounce Chapin dipper can be obtained by sending five cents to Cereo Co., Tappan, N. Y.

## THE BABY



ONE-OUNCE CHAPIN DIPPER

diluting cow's milk with gruels renders the curds softer and much more digestible than by diluting with boiled water. The advantage of using digested gruels is that, in cases of indigestion, vomiting, and diarrhœa, they form the best temporary substitute for milk. The preparation of gruels and digested gruels will be described later.

### *How to Feed a Healthy Baby*

In starting out with a food for a bottle-fed baby there is apt to be disturbance at first,

## INFANT FEEDING

unless care is used in selecting a weak food. No two babies are alike. Some babies will thrive on a mixture that would cause indigestion in other babies of the same age. By trying is the only way to find out what will suit an infant's digestion. Consequently, the only safe way to feed is to begin with *all babies* on a weak food, and gradually increase the strength. Let the baby's digestion and weight be the indication for increase in quantity and strength. A healthy baby should gain steadily about four ounces a week during the first few months of life. With the baby who is artificially fed one fact is too often overlooked, and that is that an occasional change of diet is needed. With the breast-fed baby its diet is a slight but constant change, brought about by the varying diet of the mother. In suggesting a change for the bottle-fed baby it is not meant to use an entirely different food, but that as the child grows the strength of food should increase; some new ingredient or change of diluent should be made occasionally, such as for a time substituting wheat or oatmeal gruel for bar-

## THE BABY

ley, later giving beef-juice three or four times a week, still later a teaspoonful of orange-juice once in a while. Do not keep a child on fluid diet too long. At the end of ten months begin to give a mixed diet, but not before. Start out at first by giving well-cooked cereals and meat broths, not scorning a bone to suck frequently. Vary the kinds of cereals and broths; after awhile give the baby half a soft-boiled egg or beat up a raw egg in the day's supply of milk, so that a small portion is taken at each meal. Then gradually add a small piece of toast, zwieback or cracker, baked apple or prune pulp, and at sixteen months give a little beef pulp. Avoid too much sweets, especially chocolate. If the child's digestion is good, do not abuse it by overfeeding or by giving indigestible dainties. A healthy child gains steadily; if not, there is something wrong—either he is getting too little food or too much, or the food is not the right kind—and a physician should be consulted.

### *The Administration of Food*

Next to selecting the right food for the infant, the proper manner of administering



## INFANT FEEDING

it should be considered. A perfect food, if given with but regard to regularity or quantity, is likely to upset the infant. No matter whether the baby be breast-fed or bottle-fed, it should be fed only at regular intervals, and the same amount of food should be given at each feeding. The intervals between feedings vary according to the age of the baby, from two to three or four hours; the time allowed for the infant to take what is necessary for him is from twenty to twenty-five minutes. A strong, healthy child will often take his food in a much shorter time, but twenty minutes is the time necessary for the average infant. During this period the baby should not be allowed to fall asleep, drop the nipple, and look about or play, but should be kept strictly at business. If the child refuses food, or only cares for part of a nursing, do not force him, as the little stomach knows best when it has had enough or is not in condition to receive more. Do not be alarmed if occasionally a child refuses all or part of a feeding; it does not necessarily indicate that anything is wrong or that he is ill, merely that the stomach

## THE BABY

is taking a little needed rest. A baby should always be held in a semi-upright position while taking its food, except at night, when he should lie on his side, and be kept awake until the twenty minutes are up; he should then be immediately taken from the breast or the bottle removed. Babies fed with precision and regularity seldom suffer from indigestion; good digestion usually means health, and a healthy baby is a good sleeper at night. As the infant's body compares in size with the adult's, so in the same proportion does the size of the stomach compare. Experience has also taught us that it takes about two hours, never less, more often a little longer, for an infant to digest its food. Do not, then, crowd in a meal of six ounces or more when there is only capacity for three or four ounces, and do not force a second meal when the first one has not yet been disposed of. The adult's stomach needs rest at night, then why not the infant's? He takes just as much food in proportion to his size as the adult. Put yourself in his place. Who could stand having food put into his stomach every

## INFANT FEEDING

hour or so, and at irregular intervals, both day and night? Many of the most stubborn cases of gastric disturbances in infants start just in this way. Do not imagine that every time a baby cries it is from hunger, and give him something to eat, or conclude, because he takes food an hour after he has been fed, that this, too, is hunger; persons suffering from indigestion usually crave food. On the other hand, do not let a young infant go for hours without food, simply because he is asleep. The child in consequence of the long fast, becomes ravenous, and nurses greedily, often taking much more food than the small stomach should hold. The consequence is an overdistention of that organ and vomiting. An infant irregularly fed is usually overfed; in this case he is neither satisfied nor properly nourished by his food, and is almost sure to develop gastric symptoms.

### *Intervals of Feeding*

In feeding a new-born infant always begin by using a weak formula. For the first two or three weeks the baby should

## THE BABY

be fed every two hours during the day, between 6 A.M. and 6 P.M. There should be two night feedings, one at 10 P.M. and another between midnight and morning. At three weeks, the intervals should be two and one-half hours, commencing at 6 A.M., ending at 6.30 P.M., with two night feedings as before. As the baby grows in strength, he requires stronger food and more of it, consequently, he does not need to be fed as often. From one month on he need only be fed once in three hours, between the hours of 6 or 7 A.M. and 6 or 7 P.M.

As the new-born infant requires heat, for the first few months it is best to give food containing more fat than proteid. But as the baby grows older, the muscles require building up. Then the fats can be gradually reduced and the proteids increased until they are equally distributed in the food. The sugars should remain about the same. Too much fat or sugar in the food will cause vomiting of soft flaky curds, and loose, sour-smelling stools which are frequently very green. When these symptoms are shown, it is best to



PUTTING ON THE BAND



## INFANT FEEDING

cut down the fats to one-half by removing double the quantity of "top milk" or whole milk in making up the food. In using whole milk, pour the entire contents of the bottle into a bowl or pitcher and stir it gently, but thoroughly, until the cream is well distributed through the milk. In very hot weather babies do not stand high fats as well as in winter, and it often becomes necessary to use the whole milk even for very young infants.

For the first twenty-four hours, provided the child cannot be put to the breast, give the baby only sugar-water, which is made of: sugar of milk (1 teaspoonful) and boiled water (1 pint).

### *Formula No. 1 \**

*(Suitable for the first week)*

Of the 9 ounces top milk, take 3 ounces. Of boiled water or gruel, take 16 ounces. Of sugar of milk, take 2 even tablespoonfuls.

Mix and put this in ten bottles, 1½ ounces

\* Neither lime-water or soda-bicarbonate water are mentioned in these formulas. If necessary to use them take one ounce less of water in preparing the food, and substitute an equal amount of either the lime or soda-bicarbonate water instead.

## THE BABY

each. Feed every two bours during the day, twice during the night.

### *Formula No. 2*

*(Suitable for the second week)*

Of the 9 ounces top milk, take 4 ounces. Of boiled water or gruel, take 17 ounces. Of sugar of milk, take 2 even tablespoonfuls.

Mix and put in ten bottles, 2 ounces each. Feed every two hours during the day, twice during the night.

### *Formula No. 3*

*(Suitable for the third week)*

Of the 9 ounces top milk, take 6 ounces. Of boiled water or gruel, 21 ounces. Of sugar of milk, take 2 level tablespoonfuls.

Mix and put it in nine bottles, 2½ ounces each. Feed the baby every two hours during the day, twice during the night.

### *Formula No. 4*

*(Suitable for the fourth week)*

Of the 9 ounces top milk, take 7 ounces. Of boiled water or gruel, take 21 ounces. Of sugar of milk, take 2 level tablespoonfuls.

Mix and put it in nine bottles, 3 ounces each. Feed every two and a half hours during the day, twice during the night.



## INFANT FEEDING

### *Formula No. 5*

*(Suitable for the second month)*

Of the 12 ounces top milk, take 8 ounces. Of boiled water or gruel, take 22 ounces. Of sugar of milk, take 2 level tablespoonfuls.

Mix and put in eight bottles,  $3\frac{1}{2}$  ounces each. Feed the baby every two and a half hours during the day, twice during the night.

### *Formula No. 6*

*(Suitable for the third month)*

Of the 16 ounces top milk, take 10 ounces. Of gruel, take 20 ounces. Of sugar of milk, take 2 level tablespoonfuls.

Mix and put in seven bottles, dividing the quantity equally in the bottles. Feed every three hours during the day, twice during the night.

### *Formula No. 7*

*(Suitable for the fourth and fifth months)*

Of plain or whole milk, take 14 to 16 ounces. Of gruel, take 18 to 16 ounces. Of sugar of milk, take 3 level tablespoonfuls.

Mix and put in six bottles of 5 ounces each. Feed the baby every three hours during the day, once during the night.

### *Formula No. 8*

*(Suitable for the sixth and seventh months)*

Of plain or whole milk, take 18 to 20 ounces.

## THE BABY

Of gruel, 20 to 18 ounces. Of sugar of milk take 3 level teaspoonfuls.

Mix and put it in six bottles of 6 ounces each. Feed the baby every three hours during the day, twice during the night.

### *Formula No. 9*

*(Suitable for the eighth and ninth months)*

Make up from 36 to 48 ounces of food, of which two-thirds is milk, one-third gruel. Use 3 level tablespoonfuls of sugar of milk. Place in six bottles of from 6 to 8 ounces. Feed baby once in three hours during the day, once during the night.

### *Formula No. 10*

*(Food suitable for the tenth month)*

From the ninth month gradually reduce the quantity of gruel in the milk, and for every ounce of gruel taken from the food add an equal amount of milk. The sugar of milk also may be gradually reduced.

During the tenth month plain milk, undiluted, may be given to the child, and he should be taught to drink from a cup. He should be able to take from 6 to 8 ounces every three hours and one meal at night.

For formulas Nos. 1, 2, 3, and 4, first remove the top nine ounces from a quart bottle of milk. Of this top nine ounces use

## INFANT FEEDING

only as much as the formula you are making calls for; the rest can be put back in the bottle. Either sugar of milk or cane-sugar may be used for sweetening; if the latter be employed, use only one half as much as of the sugar of milk, as cane-sugar is twice as sweet. Those who do not have a graduated measuring - glass should remember that two tablespoonfuls equal one ounce.

### *Pasteurization and Sterilization*

One advantage which the breast-fed infant has over the bottle-fed one is that the human milk is practically sterile; at any rate, germs are only occasionally found in it, while, as we now know, unless great care is exercised, cow's milk has many. The only way to overcome this difficulty and render cow's milk perfectly sterile and preserve it is to pasteurize or sterilize it. The only difference between these two processes is that the latter is a longer process, and the heat is carried to a much greater degree. This causes certain chemical changes which gives the milk a cooked flavor. Sterilization is not necessary under ordinary circumstances, unless the milk

## THE BABY

is to be kept for a long while or taken on a long journey. Pasteurization consists in heating the food rapidly to 150 or to 165 degrees Fahrenheit, and then rapidly cooling it; this kills the germs that cause many of the intestinal diseases in children, as well as most of the germ diseases, including tuberculosis. It should be well borne in mind, however, that neither sterilization nor pasteurization, boiling, or any other process will make bad milk good, sour milk sweet, or dirty milk clean. The process of pasteurization is a simple one, and numerous varieties of apparatus for this purpose can be bought. Among the best are "The Arnold" and "The Freeman Pasteurizer." With both of these come full directions for pasteurizing. A home-made pasteurizer can be constructed with little expense, and will answer the purpose as well as a more expensive outfit.

### *Home-made Pasteurizer and How to Pasteurize Milk*

For a home-made pasteurizer the following are necessary: A large tin pail, with cover, size about nine inches in depth and

## INFANT FEEDING

eight inches in diameter; have a thin disk or false bottom made, the circumference of the pail; this should be perforated and on wire supports or legs, so as to stand an inch from bottom of pail; an inverted tin pie-plate, perforated, will make a good substitute. Have a hole cut in the cover large enough to be fitted with a good-sized cork, through which you can punch out or burn a hole large enough for a chemical thermometer to be passed through; the bulb of the thermometer should reach the water, thus enabling one to watch the temperature closely, as this should be carefully observed. In preparing the food, first measure the different ingredients in the right proportions, and then place in a pitcher and mix well together; pour the exact amount of food for each feeding in as many bottles as there are feedings in twenty-four hours; cork the bottles as tightly as possible with plugs of cotton, and place your bottles in the pasteurizer with enough cold water to reach just above the food in them. The pasteurizer should then be placed over a hot fire, and the water rapidly heated to a temperature from

## THE BABY

150° to 160° in winter, from 155° to 165° in summer. Watch the thermometer, and as soon as this degree of heat is reached remove the pasteurizer from the stove, and cover with a cosey made of some heavy cloth; this is to help it retain the heat. Let it stand for ten or fifteen minutes, then cool the food as rapidly as possible to 50°, or lower, by first placing the bottles in lukewarm water, gradually cooling it until the proper degree is reached. The bottles should then be placed in a refrigerator or cool place, where the temperature is never allowed to go above 60°. Milk thus cared for will keep perfectly from twenty-four to forty-eight hours; it is desirable, however, for an infant to have a fresh supply once every twenty-four hours.

The following points should be carefully observed in pasteurizing: Procure fresh milk, free from impurities; rapid and uniform heating; perfect control of temperature; rapid and uniform cooling.

To heat the food before giving it to the baby, place bottle in a pail or saucepan of hot water (not boiling) for about five minutes; do not remove cotton plug until

## INFANT FEEDING

you are ready to give food to the baby, then place it immediately by nipple; do not allow nurse or any one else to test temperature of milk by drinking from bottle or putting nipple in mouth; test by letting a few drops fall on the tongue or wrist.

### *Care of Bottles and Nipples*

To insure clean food, the bottles and nipples, in fact, all the utensils used in preparing the infant's food, must be kept absolutely sweet and clean. If the baby be a nursing one, the breast and nipple should be bathed before and after nursing. A young baby ought also to have its mouth washed after each nursing, because at a very early age the secretion of saliva is either scanty or entirely absent, and it does not carry all the food from the mouth; that which remains is likely to ferment, causing thrush or sprue. As the infant grows, the saliva increases and keeps the mouth free from food; then twice a day is enough to wash the mouth. When the infant is bottle-fed, do not allow the bottle to stand one minute after the baby has

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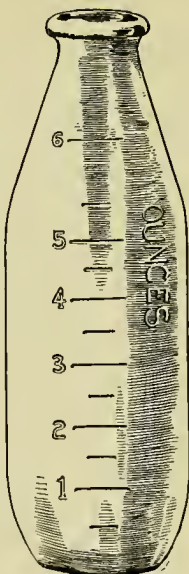
NIPPLE

finished. Bottles and nipples need immediate attention. First fill the bottle with cold water, and let it stand while the nipple is being cleaned. Thoroughly wash the nipple, both inside and out, with clean, cold water, until not a trace of milk is left; then pour scalding water through it, and place in a cup or small glass filled with a solution of boric acid, borax and water (as much borax as would go on a dime to a cup of water), or bicarbonate of soda and water (quarter of a teaspoonful of the soda to the cup of water). Nipples cared for in this way will always be sweet and clean, and do not require boiling. Boiling softens the rubber and renders nipples unfit for use, it also gives an unpleasant odor and taste to them. It is best to have two nipples at hand, using them alternately. Do not keep them in use too long; a frequent change to new ones should be made. A simple black-rubber nipple is the best.



## INFANT FEEDING

The best bottle is a round, graduated one, with a wide neck, as it can be more easily and thoroughly cleaned. Immediately after feeding, clean the bottle by first carefully rinsing in cold water; then let it stand filled with the boric acid solution, borax and water, or the bicarbonate of soda and water; finally pour off this water and place the bottle in scalding soap-suds, best made with a good soap-powder; with the aid of a stout bottle brush give the bottle a thorough washing, then



NURSING BOTTLE

rinse in clean hot water several times and set to drain. Before putting in the food, rinse once again in scalding water. All utensils used in the preparation of food, pitchers, measuring-glasses, spoons, tin dipper, etc. should be washed in the same way, not a particle of milk or

## THE BABY

grease being left to become sour or rancid.

### *Gruels*

To prepare gruels as diluents for cow's milk, use either barley, oat-meal, wheat, or rice.

*Barley Gruel*.—Beat up one teaspoonful of Robinson's prepared barley, or Cereo barley flour, in a little cold water; stir this into a pint of boiling water, and boil in double boiler for fifteen minutes. Strain if not perfectly smooth.

*Oat-meal Gruel*.—Use Cereo oat-flour and make as barley gruel. If flaked variety is used, take twice the quantity.

*Wheat or Rice Gruel*.—Use the wheat or rice flour and make as barley gruel.

*Légume Gruel*.—Use Cereo légume flour, make as barley gruel. This gruel is especially good for babies suffering from marasmus.

### *To Make Digested Gruels*

To any of the above gruels add one teaspoonful of Cereo, a digestive preparation, to one quart of gruel when cold

## INFANT FEEDING

enough to be tasted. Gruel can be quickly cooled by setting the vessel in which it is made in cold water for three or four minutes. In cases of vomiting and diarrhœa, it is always safe to stop all milk feedings at once, and give digested gruel until the doctor arrives. It is also a good plan in summer, when there is vomiting of night feedings, to substitute gruel, as it is possible during warm weather for the food which stands longest in the bottles to undergo a slight change, enough to cause the baby to vomit. In cases of vomiting and diarrhœa, when the child is to have digested gruel for one or several days, the gruel can be made twice as strong, viz., two teaspoonfuls of the barley or other flour to one pint of water. Cereo quickly thins gruel. Season gruels by adding a pinch of salt and a very little sugar. When Cereo is used, leave out the sugar.

### *Arrow-root Water*

Two teaspoonfuls of arrow-root, rubbed smooth with a little cold water; stir into one pint of boiling water; boil five min-

## THE BABY

utes, strain, add a pinch of salt and a little sugar. This is good in cases of summer complaint.

### *Egg or Albumen Water*

One pint of cold water, the white of one egg, one teaspoonful of brandy; beat together well. In cases of persistent vomiting this will be retained by the stomach when everything else is rejected.

### *Soda-bicarbonate Water*

Dissolve one even teaspoonful of soda-bicarbonate (baking soda) in one quart of boiled water. Keep in a corked bottle in a cool place.

### *Lime-water*

As lime-water will keep indefinitely, it is well to have it on hand. To make it, take a lump of ordinary lime, the size of a teacup, place it in a small stone crock or jar, holding two quarts or more, add a pint of water to the lime, and let it slake. When slaked, stir in another pint of water and let it settle. After it has settled pour off this water, as it contains the impuri-

## INFANT FEEDING

ties of the lime. The jar can then be filled with fresh water. When again settled, siphon off with a piece of soft rubber tubing, or carefully dip off enough water to fill a bottle of any desired capacity. If you wish the lime-water to be perfectly clear, filter through absorbent cotton placed in a glass funnel, or through filter-paper. Cork bottle, and set aside for use. The large jar can be replenished with water from time to time as long as there is any lime left in it. Lime-water is used in milk when there is vomiting and diarrhœa, in the proportion of one teaspoonful of lime-water to sixteen teaspoonfuls of food.

### *Bicarbonate of Soda*

When there is vomiting with constipation, use bicarbonate of soda, fifteen grains to each pint of milk; this will often cause the trouble to cease.

### *Broth*

*Mutton Broth.*—One pound of mutton (the neck is best), cut in squares about two inches in size; cover with one pint of cold

## THE BABY

water and set on stove where it will simmer, not boil, for four or five hours; strain, add pinch of salt, and let stand until cool, then skim off every particle of fat. When the broth is cold it should be of the consistency of jelly. This broth is especially good in cases of summer diarrhœa; it can be taken hot or in the jellied state cold.

*Chicken Broth.*—From one fowl take all the meat and cut it in half-inch squares, being careful to remove all fat from the meat; to a pound of meat add a pint of cold water, and proceed as in mutton broth.

*Beef Tea.*—Use the round of beef and make as mutton broth.

### *Beef Juice, No. 1*

One pound of round steak, about one and a half inches thick; broil slightly on both sides, or place in very hot oven for a few minutes; then squeeze through a meat press or lemon squeezer and season the juice with a little salt. Give cold or slightly warmed. From one to two ounces of the beef juice should be obtained. To warm beef juice, set the receptacle which holds it in hot

## INFANT FEEDING

water and slowly stir; it must not heat too much or too quickly, or it will coagulate.

### *Beef Juice, No. 2*

One pound of round steak cut or chopped in small pieces; place in glass jar, and pour in four ounces (eight tablespoonfuls) of cold water, cover, and put in cool place or refrigerator and let stand five or six hours; then strain through a piece of cheese-cloth and add a small pinch of salt. Serve cold.

### *Scraped Beef, or Beef Pulp*

Take a piece of round or top-sirloin steak, not more than three-quarters of an inch thick, scrape carefully with a tablespoon, first one side, then the other. You thus obtain a fine beef pulp, without coarse fibre or fat; mould this pulp into a small cake and broil over a hot fire, turning frequently, so it will be basted by its own juice; have it rare. Place on a plate, break it up with a fork, and season with a little salt. For children with delicate digestion a teaspoonful of this pulp uncooked and seasoned is often beneficial and relished by the child.

## THE BABY

### *Baked Apple*

Pare and core a large, juicy apple, bake until thoroughly soft, then strain through wire sieve, and sweeten.

### *Stewed Prunes*

Place in porcelain stew-pan the required quantity of prunes, cover with water, and stew slowly until quite soft; then rub through coarse sieve; put this pulp back in stew-pan with a little of the water in which the fruit was cooked, and enough molasses to sweeten, and let cook for about ten minutes. This is excellent as a laxative.

### *Stewed Fruit*

In summer, fresh fruit should not be given to young children. Fruit is much better for them if stewed in a little sugar and strained. Pears are not good in any form.

### *Oat-meal Porridge*

Porridge made from ordinary oat-meal should be cooked for one full hour; the flaked varieties fifteen minutes to one half-



## INFANT FEEDING

hour. Season with a little salt, and serve with cream and a little sugar.

### *Orange Juice*

Orange juice should always be strained through a piece of cheese-cloth or fine wire sieve before being given to children.

## CHAPTER VII

### CONTAGION—MEASLES AND SCARLET FEVER

**M**EASLES is probably one of the most infectious of the contagious diseases of childhood; it is considered a mild disease which runs a short and usually harmless course, unattended with any very grave danger. In a certain degree this is true, but no disease in children, contagious or otherwise, no matter how simple, can be considered absolutely harmless, and all contagion, no matter how mild the attack may be, should be intelligently nursed, in order to prevent, if possible, any serious complication which might occur.

To the average healthy child who is past three years old, measles is usually a slight matter; as a rule, they only suffer a few days' acute illness, are then a couple of weeks convalescing, during which time

## MEASLES AND SCARLET FEVER

they usually feel pretty well, and make a good recovery without any serious complications. But with a child under two years old it is quite a different matter; lung complications are to be guarded against, and the patient more carefully watched and nursed. The symptoms and precautions against spreading the disease, and the nursing, are facts which every mother should acquaint herself with. The earliest symptom of measles is a rather profuse running of the nose and eyes, accompanied by a short teasing cough and considerable sneezing; and on the cheeks, inside the mouth, little white spots are almost always found. It is with these early symptoms that the disease is most infectious. Let a child at this period cough only once in a roomful of other children and the chances are that four out of every five who have not previously had the disease will become infected. The mother, the teachers in the schools, the heads of day nurseries, the nurse who cares for little ones in fact, any one in charge of children or places where a number of children are gathered together should always be on the

## THE BABY

alert for these symptoms, and a child so affected should be immediately isolated from the others. Following the coryza come the rash, which appears in coarse, rather crescent-shaped patches. They usually are discovered first on the face, which is rather swollen, and behind the ears. Occasionally they are first noticed on the neck, under the chin, and from there creep up behind the ears and then to the face. However, the rash gradually spreads down to chest, body, and extremities, and in well-developed cases will even be seen on soles of feet and palms of hands. As it extends to lower part of body, it gradually disappears from the upper part, face first, and so on down until it is entirely gone. My experience with very many cases has been such that I should consider it far less dangerous in fact, ten to one, to allow the children to come together, after the rash is well developed than to be exposed in the early stages for five minutes. The most contagious period of this disease, then, is before the rash appears. The next step to be considered after a case has developed is to prevent the further spread of the disease. The period of incubation

## MEASLES AND SCARLET FEVER

after exposure is usually from ten days to two weeks. Some cases do not develop until the eighteenth or twenty-first day, but this is rare. It is always safe, however, to keep the children who have been exposed under observation until the end of the third week. When the symptoms thus described first appear the patient should be immediately removed from contact with other children. Early isolation will often prevent an epidemic. If at the end of a week no further symptoms develop, no harm has been done. If a rash develops, then the trouble will have been well worth the pains, and the chances are that many other children have been saved from being infected with the disease. Where there is a family of small children and the rash is the first intimation that one of them has the disease, let the mother not make the common mistake of distributing the rest of the children among relatives and friends in the hope of their thus escaping catching it. This is altogether wrong; the damage has already been done, they have been exposed at the most infectious period—namely, a few days before the rash appeared on the sick child, and the

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chances are that in the course of a couple of weeks the children sent away will come down with the disease, away from their own home, where they would much better be when sick; not only this, but they have carried contagion into another household, and probably many other children have been exposed. It is always at this early period that the most careful precautions against the spread of the disease should be taken. The children in a family where a case has developed should not be allowed to mingle with other children, and under no circumstances should they be allowed to attend school, until, at the very least, two weeks have passed by. If early isolation and strict precautions are taken by the mother, teacher, or others in charge of little children, much can be done to check this most contagious of diseases in communities, districts, and schools, and many little lives be thus saved. You will find the ounce of prevention in this case to be worth ten pounds of cure.

While measles is not necessarily a dangerous disease, it is one which calls for intelligent nursing. It is a disease which

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rarely, if ever, is carried in the clothing, and while it would not be quite safe to take a child in the acute stages on one's lap and fondle and press it close to the breast, then go from the room and repeat the same act with another child, still the mother, sister, or nurse may care for the sick child and still be allowed to mingle with other members of the family without danger of carrying the disease. It would be well, however, to keep a wash-dress for nursing, and not wear this dress outside the sick-room. It is always well to be careful, and to thoroughly wash hands and face before going among others.

The room used for the patient should be large, bright, and well ventilated. Thus, if a second child in the family comes down with the same disease, which is almost sure to happen where there are other children, the second patient can be placed in the same room with the first without crowding, or danger of exhausting the supply of fresh air, as would be the case in a small room. As the eyes are weak and affected by bright light, the light in the room should be rather subdued. After a few days,

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when the child is allowed to sit up, a cap with a large peak in front is a good device to shade the eyes from the glare. The room and patient must be kept warm, and draughts carefully avoided. When I say warm, I do not mean hot. The patient should not be kept so warm that he perspires, yet it is essential that the hands and feet should not be allowed to get cold. in the sick-room, as in the nursery, the open fire is, if possible, desirable, as a means both of heating the room and assisting in ventilation.

As the rash begins to disappear the fever also subsides, and after about four or five days the patient begins to feel as though he were well again, and an older child will often rebel at being kept in bed. But as it is at this stage that the lung symptoms are likely to develop, extra precaution must be taken; active children are not likely to lie perfectly quiet in bed, or neatly tucked under the bedclothes, and it is not absolutely necessary that they should be kept so; they will be much happier and more comfortable, and would also sleep better at night, if frequent change of position were made during the



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day. For a little child it is well to have a warm bed-sacque to protect the arms and chest, so that the patient can sit up in bed, and have his toys about to divert and amuse him. He can also be taken from the bed, and, with the legs well wrapped in a blanket, be allowed to sit in a chair. An older child may be up, dressed, and about the room, but must not be allowed to leave it, and should be carefully protected from draughts. At the end of two weeks, if the child has apparently made a good recovery, with no complications, there is no reason why he should not mingle with the rest of the family, but before leaving the room the entire body should be sponged with a solution of bichloride of mercury, one to five thousand, this to be followed by a bath of warm water and soap, precautions against draughts still being observed after the child has been released from the sick-room. If the weather is mild the patient can go out at the end of three weeks; in winter not until a month has passed. The diet, while the patient has fever, should be light, such as broths, milk, etc. As the fever decreases he may have gruels, soft-

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boiled or poached eggs, toast, and light dessert. At the end of the first week, if everything goes right, there is no reason why the patient should not be allowed ordinary diet; only remember that the child, not having active or out-of-door exercise, is not as well able to digest hearty food as when well. While the rash is full on the body, which is only for two or three days, the daily bath should be omitted; simply bathe face, hands, or other parts of the body which may be soiled, and dry the patient quickly. Instead of a bath the patient should be rubbed twice a day with almond or olive oil; this should be done under cover of a blanket, the oil should be warmed, and care taken that the child is not exposed to cold while this is being done; there is very little danger, however, if the room is warm. As soon as the rash has faded the child may have a warm sponge bath over the entire body each day, and it will do no harm to follow the bath by the inunctions of oil, continuing these until the child is well. With children under two years old, measles is not such a simple matter. The consequences are much more

## MEASLES AND SCARLET FEVER

likely to be serious, but when infants under one year of age contract this disease there is decided cause for alarm. With older children lung trouble rarely follows; if it does, usually the worst that happens is an attack of bronchitis. But with babies the chances for pneumonia are serious, and pneumonia is a very grave disease in infants. Fortunately, however, children under one year, especially if they are nursing babies, are not very liable to contract this disease, and if the mother or nurse is a person of careful and keen observation, is prompt to detect symptoms and to remove the suspect, there is every reason to assume that the infant will escape infection.

The cleansing of the patient's room after an attack of measles is not as serious a matter as after scarlet fever or diphtheria, but still should be looked after. The room needs to be carefully swept, the walls, if painted, rubbed down with a damp cloth, but, if papered, rubbed down with bread. Cut the loaf lengthwise through the centre and bevel the crusty edge; as the bread becomes soiled or wears rough, pare it down.

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Floors, furniture, and all wood-work, also, should be washed. If the room is then thoroughly aired for twenty-four hours there will be no danger from the disease, and fumigation is unnecessary. It may be well to state here that the disinfectant mentioned, bichloride of mercury, is a poison, and should be purchased and used only under the physician's prescription and direction. The tablets for making the solution should be kept under lock and key, that there may be no chance of patient or others getting it by mistake. Any of the solution left over should be thrown away immediately.

## SCARLET FEVER

While scarlet fever is not as contagious a disease as measles, it is a far more serious one. It is also of great importance that as early a diagnosis as possible should be made in order to prevent its spreading; most careful isolation, too, is necessary. The most malignant forms of this disease are contracted from very mild cases; on the other hand, often a mild case may result from contact with the most serious type.

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Scarlet fever is not common in children under one year old. The period when children are most susceptible to this disease is between the ages of two and twelve years; after the latter age it is not nearly so likely to occur. The period of incubation, which is the time elapsing between the time of exposure and the time when the disease develops, is from two to seven days, the usual time being from forty-eight to fifty-six hours; but if the child should not develop the disease within seven days after exposure he can usually be considered safe.

The attack commonly commences with a very red, sore throat, fever, and vomiting. Isolate a child with these symptoms at once and watch for a rash; if at the end of forty-eight hours it does not appear, the child may be released. Occasionally in little children these premonitory symptoms will not appear at all, and the first intimation of the disease is a slight rash. Consequently, as a precaution, isolate a child immediately whenever a rash is discovered, and keep the patient away from other children until the doctor decides that it is safe for the child

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to again mingle with them. Mild cases have been known when even the rash did not show, and desquamation, or peeling of the skin, was the first intimation of the disease. The rash of scarlet fever is too unlike that of measles to be mistaken for it. The rash of measles is in coarse, separate red patches, while that of scarlet fever is a fine, bright red rash or blush, continuous and uniform, having a granular surface, looking somewhat as though the skin had been sprinkled with fine sand. When the rash is at its height there is often a burning and itching sensation and the hands and feet are swollen, and by drawing the fingers across the reddened surface of chest or abdomen they leave a white track which will remain for quite a little while; the throat is also red and granular, often being so before the rash appears on the body. White patches are usually seen in the throat, especially in older children; the tongue is coated a yellowish white, with red dots, giving it somewhat the appearance of a strawberry; hence the name "strawberry tongue." If, as soon as these symptoms are discovered, the child is

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isolated, the chances are that the disease will not be contracted by any other member of the family or others who have come in contact with the child, as at this stage the disease is not generally considered contagious, although children who have drank from the same glass or have used the same spoon, a short time previous to the appearance of these symptoms have been known to come down with the disease within twenty-four hours of each other.

The rash first appears on the neck and upper part of the chest, spreading from there to the face, the lower part of the body, and the extremities. The rash reaches its fulness usually in two or three days after the first symptoms of sickness are shown. It begins to fade soon after in the order in which it comes, and disappears about the fifth day, the fever gradually declining as the rash fades. Desquamation commences about the seventh day, and it is then that the danger from contagion is most serious, as the scales of skin contain the germs of the disease. The utmost care must be taken to prevent the scales from be-

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ing scattered about the house, carried into the street, or to other homes. These germs are very easily carried in the clothing and hair of persons coming in contact with the patient at this stage. It is at this period of the disease that the patient needs most careful watching and nursing, as he feels, and to all appearances is, fairly well; consequently, the nurse is apt to become less vigilant and observant. In scarlet fever it is not the disease itself which is so serious as it is the series of ailments which are likely to follow, and unless these little things are well looked after, more serious consequences will surely result. The most serious complication which follows scarlet fever is kidney disease; through the kidneys the heart often becomes affected, and thus one train of evils follows after another. Therefore, it is well, as the rash disappears, the fever subsides, and the patient seems well on the road to convalescence, for the nurse to be most careful, in fact, double her attentions to her patient. It is most important that the action of the kidneys should be looked after and the amount of urine passed each day noted,





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and a semi-weekly or at least a weekly analysis made to determine whether albumen is present. These examinations should be made after each change of diet, also once or twice after the patient is allowed to go out; nor should this examination be neglected in the mildest cases, as it is not uncommon to have albuminuria develop and death follow when a case of scarlet fever has been so slight that this precaution was not deemed necessary and the patient pronounced well.

The first step to be taken in scarlet fever, as in other contagious diseases, is prompt isolation in a large, well-lighted, and well-ventilated room. The room should be on a top floor, as far removed from the rest of the house as possible, and, if it could be so arranged, this floor or part of the house should be shut off from the rest. Carpets, curtains, pictures, upholstered furniture, ornaments, etc., should be removed, —in fact, anything that cannot be burned, washed, or thoroughly fumigated when the sickness is over. In order that the room may not be utterly bare or desolate, strips of old carpet may be laid on the floor,

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and bright pictures from illustrated papers or magazines may be pinned on the wall. It is best not to use a mattress; heavy blankets or comfortables folded and laid on the wire mattress make a soft and most comfortable bed to lie on. If this bed proves cold, layers of newspapers or heavy brown paper placed next to the wire spring, between it and the blanket, will overcome this difficulty. This kind of bed has a great advantage over a mattress, as it is cleaner and much more sanitary.

The temperature of the room should be kept at  $68^{\circ}$ , or as near that as possible (at night,  $60^{\circ}$  to  $65^{\circ}$  is warm enough), and the air of the room should be frequently changed. This can be done without harm to the patient by covering him well, even the face, if necessary, with a blanket, and opening your windows for a short time; after the windows are closed, gradually remove the covering as the room warms up. A grate fire adds much toward perfect ventilation. The patient should have a warm sponge bath night and morning, the temperature of this bath to be  $100^{\circ}$ . After the bath the entire body should be rubbed with a one-per-cent.

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carbolized vaseline; this is to prevent the scales of skin from scattering about the room and is also mildly antiseptic. As the throat is usually more or less sore, it would be well to spray it at least twice a day with a mild antiseptic solution, such as a little borax and water or saturated solution of boracic acid. With either of these solutions mix a little glycerine in proportion of about one part glycerine to nineteen parts of the solution. If the patient is old enough to know how to gargle, let him frequently gargle the throat with cold water, as it will cool and soothe the inflamed parts; or a small piece of ice may be held in the mouth occasionally. Water to drink should be given freely, especially if there is any suspicion of kidney trouble. The nose should be kept clean by means of a small cotton swab, and the mouth washed several times a day with a piece of soft linen or absorbent cotton. Throw these bits of cotton or linen in the fire as soon as used; if there is no open fire or stove in the room, keep small boxes or paper bags for this purpose, and have these receptacles sent to the furnace for cremation.

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The nurse should watch carefully for signs of carache or purulent discharges from the ear. In case of such the ear should be syringed three or four times a day with hot bichloride of mercury, one to five thousand, or the boracic acid above mentioned, as proper attention paid to ear trouble in its early stages may be the means of saving the child from deafness later.

The patient's diet, for at least three weeks, should be of milk and nothing else; this because of the tendency to kidney trouble. If there be no signs of such complication, the milk diet can be followed by toast and light food; make the change of diet slowly, however, and under the physician's advice. Dishes used in the sick-room should be washed and boiled before sending back to the kitchen, and after boiling they must not be kept standing in the room, but placed outside of the door, to be removed as soon as possible.

The period of desquamation is usually about five weeks, but is sometimes prolonged until the seventh or eighth week; the patient should be carefully examined from head to foot, especially between the fingers

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and toes, before being allowed to leave the sick-room. Desquamation commences with fine scales, and is usually seen first about the roots of the hair or the rim of the ear. This shedding of the skin soon becomes general and the scales much larger, often coming from the body in good-sized shreds, the skin from the finger often coming off entire like the finger of a glove.

The sick-room should be swept twice a day, and the sweepings immediately burned or placed in the box or paper bag before mentioned; after sweeping, the floor, wood-work, and furniture should be wiped off thoroughly with a damp cloth wrung out of bichloride of mercury, one part to five thousand parts of water, or carbolic acid, one to forty.

The nurse should be provided with rubber gloves to protect her hands during this process. She should also wear a mob-cap to prevent the germs from getting into the hair, and should never be without it while in the sick-room. As it is quite necessary that the nurse should have some exercise in the fresh air, clothes worn in the sick-room should be removed, even to

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the shoes, and left in that apartment. The nurse can step outside the sick-room, either into a smaller one or a portion of the hall screened off, and there put on the clothing to be worn outside. She may then go out with comparatively little danger of carrying the disease, but it is better that she should not go into other rooms or parts of the house. It may be well to mention that all clothing worn in the sick-room should be made of cotton material and washable. All clothing and bedding from patient and nurse which is to go to the laundry should be soaked overnight in a solution of carbolic, one to sixty, then placed in a bag which has been wrung out of the same solution, and the bag lowered from the window to the ground below, where it is taken by the laundress and placed in a boiler and boiled for half an hour before washing. The clothing can then be safely handled without the slightest danger of infection. If a nurse is careful and conscientious in carrying out these directions, there is very little danger of the germ-laden scales being scattered. If, at the end of five weeks, the patient, after care-



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ful inspection, shows no signs of scaling, he may be released from the sick-room, and, in a few days, if the weather is mild, be allowed to go out for a little while, but if the skin is still peeling the isolation must be kept up for another week, or still longer, until it has entirely ceased.

Before leaving the sick-room the patient must have a bichloride of mercury bath (1-5000) from head to foot; this is to be followed by a thorough soap-and-water bath. Then, wrapped in a clean blanket, he is carried into another room, dried and dressed. The nurse herself should then go through the same performance. Next come the fumigation and cleansing of the room. The first step is to stop up all cracks and crevices in the room with cotton; papers should be pasted over registers, fireplaces, or any other outlet where the fumes of the disinfectant used might escape. The substance to be used for fumigation being lighted, leave the room, stopping up cracks and key-hole of door from the outside. The room should not be disturbed for twenty-four hours; then it may be opened and thoroughly aired.

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Things in the room, such as toys, books, papers, bits of carpet, etc., would best be burned. The room should then have a thorough cleaning. Floor, wood-work, and furniture should be well washed, also the walls—that is, if they are painted or of hard finish; but if the room is papered, the paper should be taken from the walls, or rubbed down with bread, as this is excellent to catch germs and small particles of dust. The ceilings should be rekalsomined.

In all cases of scarlet fever, whether mild, moderate, or malignant, the same precautions should be taken. Not one of the above is to be omitted or slighted, as it is chiefly through imperfect precautions and carelessness, or in allowing the patient to leave the sick-room before he is through desquamating, that scarlet fever is spread in families, schools, institutions, and neighborhoods, thus causing epidemics.

Note also the precautions mentioned in measles as to the care to be exercised in the use of disinfectants.

## CHAPTER VIII

### DIPHTHERIA, WHOOPING-COUGH, MUMPS, AND CHICKEN-POX

ONE custom which should be established in every household where there are children is that of looking into a child's throat; this should be done once or twice every week, and, if an epidemic is raging, I would advise doing so once a day. If this practice is established early in life, the child soon becomes accustomed to it, and, after it has been done two or three times, will not make the slightest objection to it. It is only when the unusual occurs that children are frightened and rebel. In the hospital, where the children's throats are examined almost every day, there is never an outcry; in fact, when the nurse is seen approaching with the tongue-depressor used for the purpose there is a scamper towards her, each child clamoring for the

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honor of being looked at first. To obtain a satisfactory look at an infant's throat it is necessary that the child should be held with its back pressed closely against the chest of the person holding him and directly in front of the person who is to examine the throat. The examination should be made in front of the window, but not in the direct rays of the sun. An older child need not be held, but will stand on a chair or stool for his throat to be looked at. If it is necessary to examine the throat at night, a candle can be held by a third person, and by placing the bowl of a bright silver tablespoon behind the flame the light can be reflected down the throat. A look at the throat by daylight, however, is far more satisfactory. The handle of a teaspoon is best to make the examination with; place it far back in the mouth, then firmly depress the tongue; it is the work of but a few seconds to get a most satisfactory look at the entire throat.

Diphtheria is confined to no particular season of the year, but seems to be more prevalent in damp weather. The membrane of this disease is rarely seen in small,

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separate patches, but in one continuous patch or membrane on one or both sides of the throat; sometimes it is seen only on the uvula, and again spreading, it covers the entire throat in a continuous irregular membrane. When seen at the earliest stages of the disease, the membrane is very harmless-looking, resembling somewhat a thread of cobweb, or a particle of milk which has not been swallowed, but has remained in a little gray streak across the tonsil. This patch does not, however, disappear on swabbing, and soon assumes a dirty yellowish appearance; the tissue about it is reddened, and the throat bleeds easily when swabbed.

Diphtheria, unfortunately, is not entirely confined to the throat, but is very common in the nose, where it is difficult, if not impossible, to see the membrane, and thus the disease often gains a firm hold on the patient before it spreads to the throat, where it is discovered. Nasal diphtheria is characterized by a profuse nasal discharge, which is freely streaked with blood; in fact, slight but frequent hemorrhages from the nose are always suspicious. When

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this symptom is present, do not hesitate for a moment, even. Though the throat be free from any sign of the disease, send for a physician and have an examination made at once of the nasal discharge, in order to determine the presence or absence of diphtheria bacilli. Other signs to be taken into serious consideration, though there may be no patch or nasal discharge, are hoarseness, loss of voice, and external swelling of the throat; the two first are often the first signs of membranous croup, which is nothing more nor less than diphtheria, the membrane being so far down in the throat as not to be seen, but it fills the windpipe, and the disease often is not discovered until it is too late to help the child. The following are the five important symptoms to be observed: hoarseness, loss of voice, swelling of the throat; nasal discharge; and character of patch on throat. The temperature is usually from  $100^{\circ}$  to  $102^{\circ}$ ; the throat is not so very sore, but the patient complains of throatache. The fever is not apt to run as high or the throat be as sore as in a simple case of tonsilitis. When any of these symptoms are

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present, it is time to act, and quickly. It is to be most earnestly hoped that the physician consulted is a firm believer in antitoxin. I have had under observation and nursed hundreds of cases of diphtheria and there is simply no comparison with the results before and since the use of this wonderful discovery. Before its use, one case breaking out in an institution meant most distressing results; but with this remedy at hand, both for the patient and those exposed, diphtheria is one of the least to be dreaded of the contagious diseases. It must be given, however, at the very outset, and in a large quantity, to have the desired effect; to wait until the last moment, when the entire system is completely poisoned with the disease, and then give it, is worse than useless. The germs by which the disease is contracted usually enter the system through the mouth, thus making a very good argument against children using the same spoon or fork, and drinking from the same cup, as is the habit in schools, institutions, and public places; the kissing habit should also be strictly prohibited. The germs of this

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disease are not supposed to be carried in the breath of one having the disease, but that through mucous discharges of nose, mouth, and throat, which are found to be full of them; open wounds, scratches, and cuts coming in contact with this mucus will often become infected, and a serious attack of the disease follow. Diphtheria bacilli are sometimes found in nose and throat long before the patient shows any symptoms of the disease. The period of incubation in diphtheria is usually from two to four days, but often, where conditions are favorable for the growth of the germs, it has been found to develop in a much shorter time. These conditions are found in close, poorly ventilated apartments and sleeping-rooms, also where there is defective drainage. Delicate children or those with sensitive throats are almost sure to contract the disease in such surroundings. These conditions are not only confined to the tenement-houses, close and poorly ventilated rooms, but are only too often found in the houses better arranged of the richer classes. That the disease flourishes and spreads in such environments should alone



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be a plea for plenty of fresh air for children, as it is also a well-known fact that these bacilli will not develop or grow in the direct rays of the sun, while impure air affords food for them, on which they grow and multiply rapidly. That children with delicate throats are fit subjects for this disease also shows the necessity for having any throat obstruction, such as enlarged tonsils or adenoid growths, removed as early as possible, as these keep up a constant irritation, causing the throat to become weakened and over-sensitive. Under ordinary and favorable conditions, without the use of antitoxin, the membrane of diphtheria loosens and commences to break away from the throat at about the end of a week, but in cases of unusual severity this does not occur sometimes for two or even three weeks. With antitoxin, however, if used at the outset, the membrane will commence to loosen within twenty-four hours, and will often entirely disappear in forty-eight hours; it also prevents the membrane from growing and extending. When a case is unusually severe it may be necessary to give an in-

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jection of antitoxin for several days in succession. After the throat is clear of membrane, it will, for a while, continue to be a bright red, and will bleed easily when touched. When a patch is discovered in a child's throat, or any of the above symptoms appear, it is always best to isolate the patient at once, and in all cases, no matter how mild the symptom, a culture should be taken, and a microscopical examination made to determine whether diphtheria bacilli are present.

In cases of diphtheria strictest isolation is desirable, and to prevent the spread of the disease every child known to have come in contact with the diseased child; the members of the family; and the person who is to nurse the patient should have an immunizing injection of antitoxin. This treatment will be found as effectual in preventing the disease from spreading as has been the use of vaccine in checking small-pox; it does not, however, immune the subject for as long a time, the effects of this antidote passing off in a few weeks after it is given. A serious complication arising from diphtheria is pneumonia; this is most

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likely to occur while the disease is at its height. Paralysis also sometimes follows severe cases. The most common complication, though, is anæmia, which is a deficiency of the red-blood cells; this causes a weak heart action, and is frequently followed by heart disease. It is well during the entire course of the disease, and for sometime after, to give iron. During the acute stages a fluid form is best to use, for, besides supplying the desired element to the blood, it is a good antiseptic for the throat; but it should be taken slowly and through a glass tube. A soda-bicarbonate mouth-wash should also be used after taking it. This is to prevent the drug from harming the teeth. Iron, though, should be given only as the doctor prescribes, as in some instances the stomach will not retain it. It is doubtful if swabbing the throat is as beneficial as it was once thought to be, for the throat is extremely tender at this time, and swabbing adds to the irritation, often causing a raw surface on which the bacilli feed. Gentle swabbing is often necessary, however, to remove the loosened membrane,

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and for infants who cannot gargle; in these latter cases, to gently press the affected part with a soft swab which has been dipped in a mild antiseptic is quite enough. Gargling is a far better method of disinfecting the throat. With children the gargle should be only mildly antiseptic, so that no harm will result if some be swallowed. There is no better way of caring for the throat of a child during this disease than to syringe it once every two hours with a solution of salt and water; proportion, one teaspoonful of salt to one full pint of water, and boil for twenty minutes; this solution should be from  $110^{\circ}$  to  $112^{\circ}$  Fahrenheit when used. The syringe should have a long neck or nozzle, so as to reach far back in the mouth. Place it in one side of the mouth, tilt the head slightly forward and toward the opposite side, then syringe, and the water will come out the other side; have a basin ready to catch it. If there is a profuse nasal discharge, it will be necessary to syringe the nose two or three times a day; otherwise it would best be omitted, as it is a somewhat painful and irritating opera-

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tion. Pieces of soft linen or cotton cloth should be used for cleansing both nose and mouth, and then burned immediately. The same precautions should be taken in preparing soiled clothing for the wash and in washing as are described for scarlet fever. Mucus from nose and mouth, even saliva which may drivel from the mouth, should not be allowed to remain on bed-linen or clothing for a moment, but as soon as it is seen should be immediately washed off with a cloth wet with a strong disinfectant, or the garment or bed-clothing soaked in a solution of carbolic acid, one to sixty. The same precautions should be taken by the nurse about clothing worn in the sick-room as in measles or scarlet fever. She ought also to keep a gargle for her own use, and use it freely.

It is most necessary that a patient suffering with this disease should be stimulated freely during the illness, in order that the heart action be strengthened. That the nourishment be kept up is also important. It is well to partially peptonize an infant's food, in order that a certain amount of food be retained and absorbed by the stom-

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ach. A nursing baby should not be put to the breast, but the milk may be pumped out at regular intervals and given the child. Older children should have their strength kept up by a careful and nourishing diet. The patient should be kept in bed during the entire active stage of the disease and for at least a week or ten days after the membrane has entirely disappeared; this on account of the tendency to heart failure. For this reason, also no excitement or violent exertion should be allowed for sometime, even after the patient is able to be about. Cultures should be taken from the throat two or three times a week after the membrane has disappeared and the patient should not be allowed to leave the room until a negative culture is shown. This culture should be taken in the morning before the throat has been gargled or the mouth washed.

When the doctor pronounces it safe for the patient to leave the sick-room, the room must be tightly sealed and fumigated. Open the room at the end of twenty-four hours, have it well aired and sunned for another day, then give it a good sweeping and

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cleaning. Books, toys, etc., used by the patient while ill burn. It is not necessary to carry out the extreme measures advised with scarlet fever as regards furniture, walls, etc.

## WHOOPING-COUGH

Whooping-cough is a disease which is almost, if not quite, as contagious as measles. The period of incubation is from six to fourteen days; if after sixteen days from the time of exposure the disease does not develop, the probabilities are that it will not. Children under one year are especially susceptible to it, and it is not infrequent to find babies of only a few weeks suffering from this disease. In older children the danger of any serious outcome is slight, but babies should be carefully guarded against exposure, as the mortality among infants from this disease is large, few being strong enough to withstand it. Whooping-cough is one of the most trying of the contagious group, owing to the duration of the disease, which covers a period of from three to four months. During the

## THE BABY

greater part of this time it is not safe for the patient to mingle with other children. This means isolation for the child for at least from seven to ten weeks, most physicians claim that unless the case is unusually severe it is not infectious after that period.

It is almost impossible in the early stages of whooping-cough to make a diagnosis, as at the outset the cough is in no way distinguishable from other ordinary coughs; the symptoms are, at first, slight fever and cough; the latter, instead of subsiding at the end of a week or ten days, as an ordinary cough should, begins to increase, and comes in paroxysms. During these efforts the face becomes red. The paroxysms generally increase in violence, and are accompanied by the raising of quantities of tenacious mucus from the throat, and by vomiting. There is also a deep inspiration or drawing in of the breath and holding it; this causes a peculiar noise which is called the whoop, and is most distressing. The inspiration and whoop are spasmodic, and cannot be controlled, and it is often some moments before the patient can catch his



## WHOOPIING-COUGH

breath again. With the infant the whoop is often entirely absent, and not heard during the entire course of the disease, but it is the paroxysms, redness of the face; and vomiting which make the diagnosis certain. A spoon-handle put far back into the mouth depressing the tongue and holding it there for a moment, while not a positive test, often proves valuable in helping to diagnose a case in the early stages of the disease before the whoop has developed; it is also of value as a test in infants who do not whoop, as it will bring on a paroxysm of coughing with the vomiting and redness of face; try this test several times, and if each time it brings on the paroxysm, one may feel pretty sure that the child has something more than an ordinary cough.

The average duration of the acute or spasmodic stage of whooping-cough is from four to five weeks; after this the violence of the spasms diminishes, although in some cases of unusual severity, or where fresh cold has been contracted, the duration of the acute stage is much longer.

One complication of whooping-cough is

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pneumonia, and it is this which makes the disease so dangerous in infants. This complication occurs most frequently during the winter months. In summer diarrhœa is the more frequent complication.

It is doubtful if medicine is of much value in whooping-cough. There are one or two drugs which are occasionally given to control the spasm when it is unusually severe, but they must be given only under the direction of the physician. As a rule, expectorants and medicine do more harm than good; they upset the stomach, especially that of an infant, and the stomach, above all, should be kept in good condition, as it is upon the strength derived from its nourishment that the baby has to rely to carry it through the siege. The thing which has been found to give the most relief is the inhalation of plain or medicated steam. This may be accomplished by means of an ordinary inhaler or a kettle which is kept boiling in the room, at certain intervals, the child thus inhaling the moisture-laden air. A piece of absorbent cotton or sponge may be placed in the spout of the kettle, on which has been

## WHOOPIING-COUGH

placed the medication; the steam passing through the cotton or sponge permeates the room with medicated vapor. Creosote and cresoline are considered the best substances to use for this purpose; a solution of either placed in a dish and vaporized over an alcohol-lamp makes a good substitute for the croup-kettle. Cloths wrung out of one of these solutions and hung up in the sick-room are often helpful. The very best remedy for whooping-cough, however, is fresh air. In pleasant weather let the patient be kept out-of-doors from morning until night if possible, and you will find that the child will have fewer paroxysms and less violent ones than when shut up in the house. This is rather hard on other children of the neighborhood who spend much time out-of-doors, as they are likely to become exposed and catch the disease; but the right and only thing to do under these circumstances is for the mother to be most careful in warning other mothers and nurses of the danger, and to be most conscientious in her efforts to keep her child away from others. As the disease is not supposed to be infectious ex-

## THE BABY

cept during the paroxysms of coughing, the mother or nurse will be wise, when she hears a child with this cough, no matter if the child be at some distance, to cover the head of her own child, or charge, with a handkerchief, dress skirt, or anything else that is at hand. The nose and mouth especially should be protected. Hurry the child out of harm's way as quickly as possible. Prompt action at such times will often prevent a child from catching the disease.

The nursery should have plenty of fresh air at night, but care should be taken to protect the child from draughts with a screen. When the cough comes on the child should be held forward with face downward; in this position the mucus is more easily expelled, and when this is gotten rid of the paroxysm usually ceases. Older children will invariably help themselves by either running to older persons and catching hold of them; grasping a chair for support; or sometimes running into a corner, bending over, and pressing the head against the wall, thus seeking relief. At first these attacks frighten

## WHOOPIING-COUGH

the child, and will probably be followed by a spell of crying. A basin should be kept at hand, as vomiting comes with almost every attack during the early stages.

In most contagious diseases it is most desirable to keep the patient isolated in one room, but this is not necessary with whooping-cough; in fact, the child should have as much change as possible, and be allowed the freedom of the house. If the cough hangs on for a long time, a complete change of air is often necessary to break it up, the sea-shore being especially beneficial.

The diet needs somewhat careful attention, as it is necessary that the child's strength be kept up. The regular hours of feeding will have to be somewhat broken in upon; for instance, if an infant is constantly losing its food with a cough, especially soon after it has been taken, it is quite certain that the patient does not derive much benefit or nourishment from that meal, consequently another and lighter meal should be given ten or fifteen minutes after the coughing has ceased. It may

## THE BABY

become necessary for a while to peptonize the food of the infant in order that it may be more easily assimilated. With children up to two years of age the diet should be fluid, and even for older ones, while the disease is at its height, the food, while it should be nourishing, should not be too heavy.

\*After whooping-cough no especial fumigation or disinfecting is necessary. During the disease, systematic and thorough airing of the room every day is quite necessary; this, with the use of the disinfectants mentioned, is all the precaution necessary.

## MUMPS

Mumps is probably one of the least infectious of the contagious diseases. It is usually contracted by direct contact, but has been known to be carried in clothing and by a third person. The period of incubation is from two to three weeks, although occasionally it will develop earlier; the germs of the disease are probably taken into the system by means of the salivary glands. The symptoms are, first, pain in the parotid

gland, which is a conglomerate mass lying just below the lobe of the ear. The pain is followed by swelling of the gland; this swelling is distinguishable in the fact that it has its centre just below the ear, and is usually distributed alike on both sides of this organ, and is never confined to only one side of the ear. There is considerable pain on moving the jaw, and mastication is difficult. Acids taken into the mouth will usually produce pain. The secretion of saliva is somewhat diminished, in older children often painfully so. Occasionally both sides become affected at the same time, but usually the left side first, the right side following in a few days; it sometimes happens, however, that the second side does not become affected for two or three weeks or even longer after the appearance of the first symptoms. The swelling lasts about a week, sometimes in light cases a little less; but it is necessary that the patient should not come in contact with other children for three weeks after the swelling has subsided, as up to that time there is danger of communicating the disease to others.

It is a disease which is generally unattended with serious consequences, fatal cases being almost unknown. The severest cases usually occur among large children, thirteen or fourteen years old. Infants are not susceptible to the disease, cases under four rarely developing; but from that age up to fourteen years it is most common. The treatment of mumps is simple. The patient may be kept in bed a few days if there is fever. A mild antiseptic mouth-wash should be used several times a day. It is most necessary that the mouth should be kept clean, as, the patient finding it difficult to swallow on account of scanty secretions of saliva, particles of food are likely to remain in the mouth, where they decompose. To relieve the pain, bind on a piece of flannel which has been heated and keep the affected parts warm, as moderate heat affords to the patient great relief. A thick layer of cotton is often quite sufficient. The diet, while the swelling lasts or while there is fever, should consist of broths and milk; solid food may be taken as soon as it can be masticated without discomfort to the patient. It is not considered necessary to fumigate after this disease.



## CHICKEN-POX

Chicken - pox is a mild disease, and, though it is highly contagious, it is doubtful if any serious consequences follow. The period of incubation is from ten to fourteen days, and in a few cases even longer. The disease is contracted by contact, and also may be carried by a third person. It is most often found in infants from six months to a year old, but is common in childhood up to the age of five or six years. After that age the disease is less frequently seen. It occurs at no particular season, but comes at all periods of the year with equal frequency. Occasionally some indisposition and fever precede the disease, but the appearance of the rash is usually the first sign or intimation of trouble. The rash appears first in the form of small red papules irregularly scattered over the body; these in a very short time form a vesicle, which contains clear serum or watery fluid. These vesicles, also, are found often on the mucous membrane of the mouth. On the body, the skin about these vesicles is slightly reddened; they are not deep,

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but usually confined to the outer layer of the skin. The vesicles in turn dry out and form a crust. The rash appears in successive crops, and so rapid is the process from the papular to the dry or crusty stage that the rash can be seen in all these three degrees at one time upon the body. As the vesicle commences to dry a small, dark speck appears in the centre of the spot; this is a marked characteristic of the disease, and valuable in diagnosis. The duration of the trouble is from ten days to two weeks in mild cases, but may last a month or even longer when the disease is severe. The temperature is quite irregular, but never very high. While the disease is not a dangerous one, it is best not to unnecessarily expose others and allow it to spread. The child suffering from chicken-pox should not be allowed to come in contact with other children outside his own family, and it is even better that he should be isolated in his home if there are other children. The child should be watched and not allowed to scratch these vesicles, as there is danger of poison from the finger-nails, which

## CHICKEN-POX

would make a more deep-seated ulcer—one that would burrow into the flesh, and, when healed, leave a scar. The finger-nails will also carry the serum contained in these vesicles to other parts of the body, re-infecting it, and thus spreading and continuing the duration of the disease. The body should be bathed every day; if the case is severe, sponge the infected parts with a mild disinfecting wash, or rub on carbolized vaseline. If the disease is discovered at an early stage, when there are only a few papules on the body, much may be done towards preventing the child's re-infecting itself and spreading the disease by dusting these spots with boracic-acid powder, and then covering with a little flexible collodion or small squares of isinglass plaster. I have known this treatment to prove quite effectual in checking the disease. If there is fever, the diet of the patient should be fluid, or very light, until after the fever is past. This disease needs no special medication or treatment other than that described. Funigation is not necessary, but is a good thing on general principles.

## CHAPTER IX

### CONSTIPATION

CONSTIPATION in infants and in children is a disorder rather than a disease, and is usually more common in bottle-fed infants than in those who are breast-fed. As this trouble is best treated by means of diet and habit, rather than by medicine, it is within the ability of most mothers to successfully treat any physical shortcomings the child may have in this respect.

When constipation occurs in the breast-fed infant the cause can usually be traced to the mother, and, naturally, through her relief can be obtained; for constipation in the mother invariably means the same condition in the child whom she nourishes. If a mother who is nursing her child is constipated, chronically or even temporarily, it is best for her not to seek relief through the use of purgatives unless ab-

## CONSTIPATION

solutely necessary, as they are more than likely to disturb the child, causing colic, pain, and diarrhœa. Neither is the use of enemata advisable, for while this may relieve the mother, the child's condition (if suffering from constipation) is unrelieved. The best method for the mother to pursue is to give careful attention to diet, take plenty of fresh air and light exercise. Women with sedentary habits are always more or less constipated. Let the mother who is troubled with constipation try laxative gruels such as are made of yellow cornmeal or equal parts of graham flour and oatmeal. These gruels should be made with water, thin, well salted; and a large bowlful should be taken between meals. In addition to the gruels, eat graham bread and crackers instead of wheat bread and biscuit. Bran gems made of one quart of bran, one quart of flour, one pint of milk, one-half pint of molasses, a teaspoonful of baking soda, and a pinch of salt are excellent. They have never been known to fail as a cure for constipation, even in the most stubborn cases. If these efforts on the part of the mother are without effect on

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the child, I would then advise giving him one or two feedings a day of cow's milk, using a formula suitable to the age of the child; but, instead of using the sugar given in the formula, substitute one of the well-known malt foods, such as "Mellin's Food" or "Malted Milk," using from one-half to two teaspoonfuls of the food to each bottle, according to the age of the child. Orange or beef juice may safely be given to a child after the fourth month, the quantity varying from one teaspoonful to two table-spoonfuls twice a day, preferably morning and afternoon between feedings.

Another factor in overcoming constipation in both breast and bottle fed infants is to encourage in early life the habit of having a movement at a stated hour each day. In order to accomplish this, directly after a morning feeding and after the late afternoon feeding, put the child on a small vessel and hold him there for five minutes. The vessel should be placed on the lap between the knees, supporting the child's back with the hand while he is being held in position. At first, in order to obtain a movement, as well as to teach the child

## CONSTIPATION

why he is placed on the vessel, a small soap, gluten, or glycerine suppository may be used; the suppository should be dipped in sweet-oil or vaseline before being inserted in the rectum. It will not be necessary to do this for more than two or three days. It is the practice of some to induce a movement in children by inserting the oiled tip of the finger or the end of a hard rubber syringe into the rectum. This is an extremely bad habit, as it may cause an abrasion of the skin at the anus or of the mucous membrane, and infection is apt to follow, especially if the abrasion is caused by the finger-nail. I have known several severe cases of rectal abscesses as a result of this procedure.

After the third week it is perfectly safe, if the child's back is properly supported, to commence to place the child on the chamber each day. The results are surprising, and in a very short time—from ten days to three weeks—the child will have formed regular habits in this respect. After the fifth month, or as soon as the child is able to sit in an upright position, a nursery chair may be used. When the

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child is large enough for the legs to hang down from the chair, it is well to place a small stool under the feet, high enough to slightly elevate the knees and give the feet a firm support.

A bottle-fed infant is more inclined to constipation than one breast-fed, but in both cases the treatment is the same as far as forming the habit is concerned. The effect of orange and beef juice is also the same, but the bowels of a bottle-fed child can often be regulated by some slight change in the food, and are often affected by the addition of a small amount of cream, and some by the addition of "Mellin's Food" or "Malted Milk" in each bottle. As soon as the child's bowels become regulated I would advise discontinuing the malted foods and keeping them in reserve, to fall back upon in case of necessity. Strained, thin oatmeal gruel as a diluent for milk is another helpful agent in these cases; but oatmeal being more or less heating to the blood, its use is not recommended during the summer months. Massage applied to the abdomen twice daily is also a help toward overcoming constipation, but is



## CONSTIPATION

more effectual in older children than in infants. After the tenth month orange and beef juice, malted foods, and oatmeal gruels can be given in larger quantities, according to the age of a child. A year-and-a-half-old child could have the juice of one-half to a whole orange, and from two to three ounces of beef-juice; of malted foods from two to four teaspoonfuls to a meal, and oatmeal thick enough to constitute a jelly.

As the child grows older the means by which this trouble may be treated are more varied. The stomach, by gradual development, is capable of caring for a larger variety of food, and different laxative foods may be added to the diet, such as porridge made of graham flour and oatmeal, and stewed fruits; later, raw or very rare scraped beef, graham, oatmeal, or indian-meal crackers. When the child is two years old, if constipation still persists, gradually reduce the quantity of milk and give him plenty of fresh vegetables, stewed fruits, fruit juices, scraped raw apple, and graham bread, at least twenty-four hours old, spread generously with butter. Butter is excellent for this trouble, but must not be

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used when melted. Pure olive-oil taken twice a day with meals in quantities from one teaspoonful to one tablespoonful is also good. Massage at this stage is very helpful; it consists of rubbing or kneading the abdomen with the hand, commencing at the lower right side, then working up slowly across the abdomen and down the left side. If there is any resistance on the part of the child, or if the abdomen is held tense, the treatment is of no use and had better be dispensed with.

Another factor in the treatment of children who are constipated is the use of water; it should be given in generous quantities between meals. Even a little infant should be given from one-half to one teaspoonful two or three times a day. A child two years old should commence the day by taking in instalments one-half glass of cold water from one-half to one hour before breakfast, and one glass between meals. Not half enough attention is paid to the systematic drinking of water, especially after the child is old enough to help himself. A child at this age will rarely think to take any except at meal-time

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or when he becomes very thirsty from some special cause, such as violent play or exercise; and at such times, unrestrained, he is likely to take more than is good for him.

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As teething is one of the perfectly natural processes of development in the infant, it would seem that this growth should not be attended with any more disturbance than the growth and development of any other part of the body. There is no doubt, however, that many infants are more or less disturbed at the time of dentition, while not a few really suffer pain. It is a great mistake, though, to attribute all the petty ills, every pain and disturbance, from the time the child is a few months old until he is two years old, to the teeth. A healthy child, nursed at regular intervals by a perfectly healthy mother, should not suffer with his teeth unless the mother, as she sometimes does at the first sign of teething, thinks that it is necessary to provide the baby with an ivory ring, a new silver dollar, or some such hard substance to bite on; this is apt to harden and toughen the gum tissue and

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make it more difficult for the little teeth to force their way through.

The time when the first tooth should appear in the healthy nursing infant is from the sixth to the eighth month. For a bottle baby the time is usually a month or two later, and is sometimes delayed even to the tenth month. If the diet of the child has been principally patent foods, which are chiefly composed of sugars and starches, and have very little bone-making material in them, dentition is often delayed until the twelfth or fourteenth month. The first teeth that make their appearance are the two middle lower ones, or, as they are called, the lower central incisors. There is then a rest of four weeks, when the four upper incisors come through; then another rest of one to three months, and the two lower lateral incisors with the four molars or small double teeth make their appearance. The next are the four canines, or stomach and eye teeth, which come two or three months after the molars. Lastly, after an interval of three or four months, come the four posterior molars, which are the last of the milk, or temporary, set of

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teeth. The last teeth are cut at about the twenty-fourth month.

Usually, two or three weeks before the teeth appear there is an increased flow of saliva, the infant drools considerably, and will often show signs of much thirst; he will take the breast or bottle eagerly, and carries his fingers, or anything else he can grasp in his hand, to his mouth, and bites and chews on it. The gums begin to round out and lose the sharp appearance at the edges. The tooth before it makes its appearance is encased in a little sac. As the tooth grows and begins to push its way upward through the gum, it is according to the amount of resistance it meets that the process is more or less painful. If the gums are soft and offer little to retard the tooth's growth, the child suffers very little or none; if, on the other hand, the gums are tough and hard, as is often the case in tardy dentition, the tooth in its growth causes more or less pressure at the base, where the sensitive dental nerve lies. It is this pressure which causes the pain in teething children, and the accompanying fever and fretfulness.

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That the child carries everything to its mouth and seems to take comfort in biting on things would go to show that the most sensible thing to do would be to give him something to bite on. This is quite right, but, as has been said, do not give the baby a hard substance, such as ivory or metal of any kind. Neither is it well to be continually rubbing the gums in hopes of helping the teeth through, as the continual biting on anything hard or rubbing the gums tends to make them tough, and therefore the cutting of the teeth more difficult and painful. Give the baby something to bite that offers less resistance—a soft rubber ring, for instance. If there were not danger of the thumb-sucking habit being formed, the baby's little fingers would serve the purpose very well. During the drooling period, especially if the excretion is somewhat excessive, it is well to place under the little bib a layer of oil-silk or thin rubber, to prevent the dress and underclothing from becoming wet and lying damp and cold next to the chest. One of the most important things *not* to do at the time of teething is to overload the in-

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fant's stomach. Over-feeding plays a very important part in the many ills children are apt to suffer at this time which are wrongly attributed to teething, but which rightly come from the stomach. As the symptoms of teething begin to show themselves, especially when the child evinces thirst and takes the breast or bottle eagerly, the young mother is apt to think these signs show hunger and the child needs an increase of food; on the contrary, where dentition is rather difficult, the child irritable, possibly more or less feverish, it is not advisable to add to these discomforts in the smallest degree, and there is probably no more simple or dangerous way to do this than to give the stomach extra work at this time. As there is much more danger from over-feeding than from under-feeding at this time, be sure to be on the safe side; and with these symptoms — namely, swollen gums accompanied by restlessness or fever, no matter how slight — reduce the baby's diet for a day or two, by either giving less in quantity or making the food weaker. Thirst may be relieved by giving water frequently and in small quantities. The old-fashioned

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habit of giving a bit of ice wrapped in a piece of flannel is not a good one, as the ice is too hard a substance for the gums to come in contact with, and the water obtained from it is not pure. The child usually has more trouble with the last teeth which are cut than with the early ones, as at this age the child is usually having a heartier and more varied diet. It will often be necessary to stop everything in the way of cereals, thick gruels, or heartier food, etc., and for a short time limit the nourishment to diluted milk and broths. Fever, rashes, extreme restlessness, convulsions — any such disturbance during the first two years of life is more often due to stomach and intestinal disorders than to the mere process of teething; careful attention to diet during this period of the child's life controls most of the ills attributed to dentition.

The period when dentition is most likely to be painful is when the teeth first begin to grow in the little sacs which encase them. It is at this time, if at any, that the child suffers, especially a child whose teeth are late in coming, and whose gums have therefore become hardened. It is sometimes,



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in cases like this, advisable to lance the gums, but the cut should be made deep enough to pierce the sac which contains the tooth. This process does not mean, as many think, that the tooth will come through within a few days, for this is not the case; it may still be two or three weeks before the tooth makes its appearance; but it does mean that the tension is relieved and the tooth finds it much easier to force its way through a scar, which is much more tender than the original tissue. When the tooth is seen under only a thin layer of gum, all discomfort is over so far as that tooth is concerned.

It is a mistake to think that the child's first set of teeth need little or no attention, and that nature will care for them. As a matter of fact, from the moment the first little teeth make their appearance the care of the teeth should commence. The strength of the second or permanent teeth depends largely on the good and sound condition of the first. As the decay of the teeth always commences from the outside, the first care is the mouth. It should be kept clean, and none of the germs which cause

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decay be allowed to remain there. Acid is one of the first causes of decay in the early teeth, and the cause of acid in the mouth is that after each meal a small portion of the milk is apt to remain in the mouth, where the warm temperature causes fermentation. In a small baby, the mouth should be washed with water containing a pinch of borax or boric-acid solution after every meal, and at least two or three times a day in an older child. A soft bit of linen or a little absorbent cotton wrapped around the finger is sufficient for this process. When the child's double teeth come, a narrow, soft tooth-brush should be used. Be sure to use the brush gently, employing the horizontal motion and the perpendicular as well, as by doing this the bristles of the brush get between the teeth and dislodge little particles of food which cling there. The mouth also should be opened wide, and the crown of the teeth well brushed. After the teeth are washed, the mouth should be thoroughly rinsed. It is not necessary to use soaps or tooth pastes or powders. Plain boiled water, or water with a pinch of borax, or a saturated solu-

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tion of boric-acid wash, the last being mildly antiseptic, can be used. Either one of these is sufficient to keep the child's mouth clean and healthy under ordinary circumstances.

## CHAPTER X

### EMERGENCIES

IN a family where there are little children emergencies often arise in which it is necessary to act quickly—in fact, at once. At these times, by intelligent aid or interference, much can be done to give relief, a life even may be saved before a doctor can get there. Many simple ailments of children may be safely treated and many emergencies met by a clear-headed mother when a doctor is not at hand. The “little knowledge” which is proverbially “a dangerous thing” is quite the reverse if wisely applied in cases of emergency. Take the case of a child with an attack of croup, for example. With most children this attack comes on very suddenly, usually in the night. In many cases it is a serious matter, and immediate action is imperative. It is not always possible to

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have a doctor at a moment's notice, especially at night, and every mother should know how to act at once, and know not only one, but a half-dozen remedies.

*Croup.*—The croupy cough is one never to be forgotten, and is so different from the ordinary cough that, when heard, it is recognized almost immediately. It is a harsh, barking cough, with a metallic ring. The respirations become labored and slow, and the air as it comes through the trachea often makes a whistling sound caused by the child's struggle for breath. No time should be lost in attempting to relieve the sufferer. In a family where there are young children it is well to put ipecac on the nursery medicine-list, to be used in this emergency; fifteen drops may be given every fifteen or twenty minutes, until the child vomits. If, after four or five doses, vomiting does not take place, it is unnecessary to give more. Other methods must then be tried to induce vomiting, which relieves the child, the object being in this way to force up the tenacious mucus which has lodged in the throat and is interfering with breathing. Warm mustard and

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water is often successful, or, by running the finger down the throat one can often dislodge a quantity of the tough substance that is distressing the child. In the mean time, sponges or cloths wrung out of very hot water may be placed upon the throat just below what is called the "Adam's apple." The inhalation of steam is a most important thing in the treatment of croup, and, usually, will give more and quicker relief than anything else. While these first-mentioned remedies are being tried, have some other member of the family at work getting up steam, either by putting a tea-kettle on the kitchen fire, if there happens to be one, or by heating water over an alcohol-lamp or gas or oil stove. It is best to put only a little water in the kettle, in order that it may boil quickly. Construct a large funnel of stiff brown paper, or even of newspaper, and have this improvised funnel lead from the spout of the kettle to the child's mouth and nose, and let him inhale the moisture. Another way is to put a sheet over a small crib and let the child lie in this tent inhaling the steam, for hours at a time if necessary, occasion-



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ally lifting a corner of the tent for a little air. This treatment is most effectual even in very severe cases of croup, and can be kept up for twenty-four hours, or longer if necessary, without the slightest injury to the patient, but greatly to his relief. All this can be done to help the child until the doctor arrives.

*Colic.*—Colic in young infants is common as well as distressing. The remedy is very simple, and its cure may always be effected without the use of alcohol or drugs. Colic is most commonly caused by one of two things—indigestion or cold. The symptoms are, rather violent paroxysms of crying, legs are drawn up on the abdomen, and the extremities are usually cold. As a preventive, assist the circulation and also the digestion by keeping hands and feet warm. Do not give a baby whiskey, fennel, or other herb teas; it is only because these drinks are given hot that they help the trouble at all; plain hot water will give just as much relief and will not upset the stomach. The water must be given very hot, and by a dropper, two or three teaspoonfuls at a time; try a few drops on

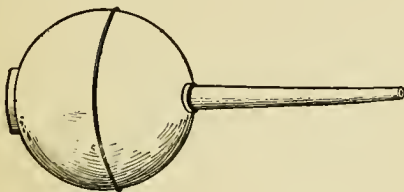
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your own tongue first in order not to scald the baby's mouth. Often, simply warming the hands and feet in front of an open fire, or laying the baby across your knee on his stomach, with your warm hand under it and gently patting the back, will be all that is necessary for a cure. A hot-water bag laid upon the stomach is also good. If the attack is a very hard and stubborn one, a few drops of essence of peppermint may be added to a wine-glass of hot water and a few drops of the mixture given to the child; or a bit of soda-mint tablet can be given with good effect.

*Earache.*—This is another common ailment of babies; they often suffer much, and are frequently treated for other troubles before the real one is discovered. A child with an earache will awaken suddenly from a sound sleep with a sharp cry, and usually put his hand to his ear; after a short crying-spell he quiets down or falls asleep, only to waken again later with another paroxysm. Heat of any kind applied to the ear will almost always give relief, but, if it does not, the doctor should be called. A small hot-water bag placed against the

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ear, or small muslin bags filled with hops, bran, or salt—in fact, anything which will retain the heat—heated in the oven and applied to the ear, will relieve the pain. If the attack occurs at night, it is not always convenient to procure one of these things, then the warm hand placed over the ear will afford some help; a flannel is still better, whether it be the baby's band, his shirt, or his petticoat; it can be heated very quickly by holding it against the gas-shade or the chimney of the lamp. If a little hot water can be had, syringe the ear with some, at a temperature of  $110^{\circ}$  to  $115^{\circ}$ ; then apply the hot flannel. Continual or



SOFT RUBBER EAR SYRINGE

frequent attacks of earache should be treated only by a physician.

*Nose-bleed.*—Hemorrhage from the nose

## THE BABY

occurs frequently among children, nervous and excitable children being more liable to it than are others. These attacks will often occur several times a day for three or four days. In such case the child should be put to bed and kept as quiet as possible; if after several days there is no recurrence, he may be allowed to get up, but should be kept from excitement or hard play of any kind. The ordinary nose-bleed, of which many children have occasional attacks, may be controlled by placing a small bit of ice, wrapped in a soft cloth or piece of absorbent cotton, across the bridge of the nose; cold applications at the back of the neck, pinching the nose, pressure on upper lip just beneath the nostrils, stuffing cotton or soft tissue-paper under the upper lip, sitting in a semi-upright position with the hands kept above the head, are all simple means by which nose-bleed is controlled.

*Swallowing of Foreign Substances.* — Children who creep or run about the room are constantly picking from the floor, table, or chairs little articles such as buttons, beads, bits of broken crockery or glass,

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sometimes a coin. These articles are often put in the mouth and swallowed. Children have also been known to swallow small pieces of jewelry, which were intended to adorn their persons rather than to clog their little stomachs—tiny locket, chains, finger-rings, etc. The preventive is not to leave any of these small temptations about, such as jewelry, pins, needles, and, above all, an open safety-pin. These should never be within the reach of a little child. It is a habit of many mothers and nurses, when dressing or changing a child, to stick the safety-pin in the pillow, bedding, or upon the person, unclasped; their attention may be called off, perhaps, for only a few seconds; but it is the work of an instant only for the child to grasp the pin and put it into his mouth. Nothing is more difficult to extricate from the throat than an open safety-pin; it is almost impossible without an operation, and in many cases even this does not avail. If a particle of food or some other object lodges in the child's throat and cannot be removed by the fingers, and the child becomes blue from choking, and measures must be taken for instant relief,

## THE BABY

a sharp blow between the shoulders, or turning the child upside-down, holding him by the feet and administering several sharp slaps on the back, may force it out. If neither is effectual, run the finger down the throat on the right side as far as it will go; sometimes one can reach beyond the obstruction, and, by curving the finger, dislodge it; in the mean time send for the doctor as quickly as possible. If the foreign body swallowed passes down out of sight, it will probably reach the stomach, and there is no need for alarm. Do not, however, make the common mistake of giving the child a cathartic in order to hurry the object along through the intestines; this is wholly wrong. The result is that all the substance in the intestines becomes thin and watery, thus rushing on past the obstruction, leaving it to find, perhaps, a lodging-place for itself in one of the turns or twists of the intestines, and there it remains to set up an irritation and inflammation. The proper thing to do is to give the child solid food—mush, bread, or potatoes—which, imbedding the object swallowed, carries it

## EMERGENCIES

safely through the intestinal tract, to be ejected without having done any harm.

*Burns.*—Simple burns, where the flesh is merely scorched or only the outer layer of skin broken, may be made comfortable and effectually treated by laying on a little bicarbonate of soda (common baking soda). If that is not at hand, a soft linen or cotton cloth, spread with olive-oil, or linseed-oil and lime-water, equal parts, or vaseline, or sweet, clean lard; this should be laid over the parts burned, then covered with cotton or numerous soft cloths to exclude the air. If the burns are more serious, a doctor's care is needed at once. If the accident happens at a time or place where it may be several hours before the physician can reach the child, much may be done in the mean time to relieve its sufferings. First cut all clothing from the child; do not attempt to remove it in any other way. Where burns are extensive, there is always more or less danger of blood-poisoning. This danger may be averted and great relief afforded to the patient if the wounds are treated in the following manner: Tear into strips, about four inches wide and ten inches long,

## THE BABY

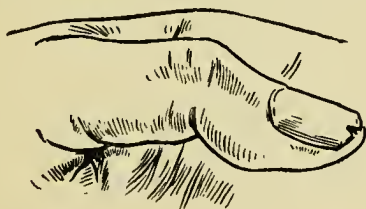
clean pieces of old linen or cotton cloth; fold or roll these into small packages, and boil for fifteen or twenty minutes in a solution of salt and water, two teaspoonfuls of salt to a quart of water; cool the water by placing the pail or other vessel in which the cloths have been boiled in a pan of cold or iced water; when lukewarm, wring out the cloths and lay two or three thicknesses over the entire surface burned. If the hands and feet are involved, care should be taken to place bits of linen between the fingers and toes, and wrap up each member separately; over these wet compresses bind on thick layers of cotton, and over this oiled silk or even paper, as it is very essential to exclude all the air possible. Keep the patient quiet until the doctor arrives.

*Splinters.*—A splinter is a very little thing, but capable of creating a great deal of mischief, discomfort, and pain. Every mother of small children should provide herself with a pair of small, sharp-pointed forceps for this emergency. When the splinter is imbedded in the flesh of hand or foot, the point of a small pair of scissors—



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a manicure pair will answer the purpose—should be inserted in the skin directly over the splinter, and a small incision made. If there be any bleeding, stanch it by a little pressure; then open the wound by stretching it a little, and with your forceps pick out the sliver. When the splinter is under the nail, cut a little V-shaped piece out of the nail, and the



V-SHAPED CUT FOR SPLINTERS

splinter is easily removed with the forceps. Protect the wound with a little collodion and a finger-cot.

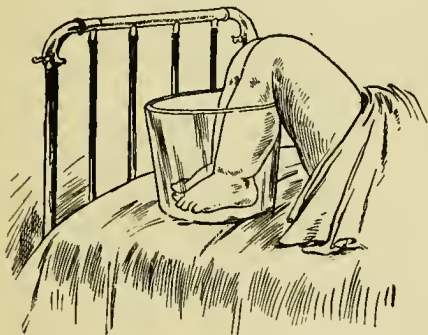
*Convulsions in Children.*—A convulsion may mean serious brain trouble, but this is not true in the majority of cases. Convulsions in young children are more often caused by indigestion or an overloaded stomach than by anything else. In either

## THE BABY

case a doctor should be consulted as soon as possible. While waiting for him the mother may do much to relieve the child and quiet the spasm. Let her first thought be of what has gone into the child's stomach, also how long since there has been a movement of the bowels. Sometimes a small quantity of indigestible food will, in a short time, cause considerable disturbance. If the convulsions come from indigestion, from an overloaded stomach or intestinal obstruction, immediate means of relieving these conditions should be taken. To relieve the stomach, vomiting may be induced by running the finger down the throat, or by a simple emetic, such as mustard and warm water; the bowels may be washed out by a high injection of warm soap and water. Cold applications should be applied to the head by means of cloths wrung out of ice-cold water; an ice-cap or an ice poultice, the latter made by cracking ice finely, mixing it with flax-seed meal or bran, and folding it in a piece of oil-silk. While the ice is being applied to the head, put the feet and legs up to the

## EMERGENCIES

knees in a mustard bath. This may be done, while the child is lying on his back, by flexing the knees and placing the pail or foot-tub close to the thighs and putting the feet in. In this way the foot-bath is easily accomplished without disturbing the patient. The bath should be continued



FOOT-BATH IN BED

until the extremities become well reddened; it is then removed and hot-water bottles placed at the feet. The temperature of the bath should be about  $105^{\circ}$ , and two tablespoonfuls of mustard should be added for every gallon of water.

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*Frost-bites.* — Frost-bites are less common in babies than in older children, although I know of a case where an infant had its cheeks frost-bitten in a brisk March wind while the day was not very cold. The nurse, being young and healthy, enjoyed the walk, the fresh wind blowing in her face without doing the slightest harm, but the delicate cheeks of the baby suffered. In a case of this sort cold cloths, the colder the better, should be applied to the affected parts for five or ten minutes. When the ears, fingers, or toes are actually frozen or frost-bitten, use cold applications for the ears, and dip the hands or feet in ice water; or, if there is snow on the ground, rub these members with it or with a bit of ice. The frozen parts are always of a waxy whiteness in the beginning, but almost immediately after coming in from the cold air they turn a reddish-purple hue and begin to swell, and there is much pain. Use the cold application as soon as it is possible to do so.

*Bowel Troubles.* — Summer diarrhœa, which is common in infants and children, if taken in time, can often be quickly ar-

## EMERGENCIES

rested, and, I think, may be properly classed under the head of emergencies, especially during the summer months, when the patient is away from home and his own physician, and many miles from any doctor. The chief cause of diarrhœa in children is improper food, (such as partly cooked cereals and vegetables, unripe or over-ripe fruit, milk which is not perfectly pure, sweet, or clean, thus containing poisonous bacteria,) and cold which settles in the bowels. The first sets up a local irritation which, if relieved in time and under proper treatment, may be stopped at the outset, probably without further trouble, but if neglected and allowed to go on, or if improperly treated, may lead to serious consequences. The average mother, and occasionally an inexperienced practitioner, will treat these attacks by giving a dose of paregoric or some patent mixtures concocted for summer complaint. As a matter of fact, nothing could be more harmful or injurious or do so much to retard a quick recovery as this treatment. Doses of this sort are positively dangerous, and in giving them, instead of removing from the intestines the cause of the dis-

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turbance, you are taking every means to keep the irritant right there, to go on with its work of destruction.

The opium which these concoctions contain may soothe and deaden the pain for a while, but the effect soon passes off, and the foreign element remains, to make matters still more serious. In all these cases, at the very outset, a purgative should be given, and in many simple cases the treatment need not be carried further. Castor-oil is perhaps the safest in the hands of a novice; the oil is bland and soothing to the inflamed mucous membrane, and it is perfectly safe for the mother to give one, two, or three teaspoonfuls, according to the age of the child. This will act as an agent to carry off the poisonous or irritating matter. When these attacks occur, especially if there is fever, it is best to put the child to bed and keep him quiet for a day or two. Milk and solid food should be discontinued for a few days, gruels and broths being substituted. These gruels should be made of barley flour, wheat, farina, or arrow-root, and be thoroughly cooked. The broths may be of

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either mutton or chicken, made strong enough to jelly when cold. If the patient is a baby, milk must be added to the gruels very slowly and gradually, commencing at first with as small a quantity as a teaspoonful to a bottle of gruel; as you proceed, if the disease shows no signs of recurring, the food can be gradually brought up to its usual strength. In an older child, as the attack subsides and responds to treatment, the fluid diet may be followed at first by toast and a little raw beef. If the stools are very watery and frequent, give the child large quantities of water to drink; it is essential that the water be boiled and cooled. It is wise to have a child wear a woollen abdominal band to prevent cold.

*Foreign Body in Nose or Ear.*—Many children have the habit of pushing small, hard substances, as shoe-buttons, beans, or peas into the ears or nostrils. A simple way to remove an object from the nose is to compress the side opposite the obstructed nostrils and make the child blow his nose violently. If he will not do so, induce a sneeze by tickling the nostrils with a feather, blade of grass, or some fluffy substance;

## THE BABY

if this will not answer, a little pepper or snuff should be used to accomplish this purpose, as a hard sneeze will probably remove the obstruction. If these should fail, the doctor should be called in. If the object is in the ear, it is a little more serious and more difficult to remove. Objects such as insects, bugs, beads, or small pebbles may be forced out by gently syringing the ear, or by pouring in a few drops of oil or glycerine. But if the object is large, and so tightly wedged in that it cannot be easily removed in this way, do not tamper with it, but take the child to a good otologist at once. If the object is a pea or bean, it is best not to syringe the ear, as the water will cause the pea or bean either to swell and lodge itself more firmly in the passage, and considerable pain will follow. An old-fashioned and excellent way to remove objects which are in too far to be easily reached is to take a camel's-hair brush, or a small stick which has been tapered off almost to a point, and dip the end in some stout glue, touch this to the obstructing body, allow the glue to harden, then gently draw it out.



## EMERGENCIES

*Cuts and Bruises.*—The best thing to do when there is a cut, large or small, is to cleanse the wound thoroughly, in order that dirt, particles of sand, or other matter may not remain to irritate and perhaps set up blood-poisoning; this can be done by holding the injured part under running water. Then bring the lips of the wound together and bind on a wet pad; pressure will control the bleeding, and the chances are that the wound will heal without further trouble. If the wound is large enough to need stitches, prepare it in the same way until the doctor comes. If you wish to be very careful, use water boiled that has been cooled; also boil the compress and bandage used.

When the wound is not only a cut, but the flesh is also badly bruised, bind on cloths wrung out of a solution of boracic acid, one teaspoonful to a pint of water. Witch-hazel and plain boiled water are both good; these applications should be cold. Do not smear vaseline, ointment, oils, or salves over the bruised flesh.

In cases of severe bumps, where the flesh is not broken, apply alternately compresses

## THE BABY

of very hot and very cold water; cold will reduce the swelling, heat relieves the congestion, and a black-and-blue spot is the less likely to occur.

*Hiccoughs.*—Infants are often subject to attacks of hiccoughs, and, while not serious, they are rather uncomfortable and distressing. Hiccoughs are caused by a spasmodic contraction of the diaphragm, and a very simple means of relief is to place upon the end of the tongue a few grains of granulated sugar, which, as it dissolves, runs slowly down the throat. This or a few dropperfuls of hot water given very slowly will usually cause a cessation of the paroxysms.

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